REGIONAL REPORT ON

THE ACHIEVEMENT OF THE MILLENNIUM DEVELOPMENT GOALS

IN THE CARIBBEAN COMMUNITY

UNDP

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The analysis and policy recommendations of this Report do not necessarily reflect the views of the United Nations Development Programme, its Executive Board or its member states. The Report is an independent publication commissioned by UNDP. It is the product of a team of eminent researchers from the University of the West Indies, Mona, Jamaica. Thomas Gittens, Programme Manager, Caribbean Oversight and Support Centre, RBLAC, UNDP, co-ordinated the finalisation and publication of the Report.

Preface

The Regional Bureau for Latin America and the Caribbean (RBLAC), United Nations Development Programme (UNDP) is most pleased and privileged to have supported the preparation of this first Millennium Development Goals (MDGs) Report for countries in the Caribbean Community (CARICOM). Indeed, this is the very first regional MDG report of its kind globally, and is thus a significant first for the Caribbean. The United Nations Millennium Declaration that was the product of the Millennium Summit of September 2001 contained a number of goals and targets to be achieved by 2015 in such areas of eradicating extreme poverty and hunger, achieving universal primary education, promoting gender equality and empowerment of women, reducing child and maternal mortality, combating HIV/AIDS, malaria and other diseases, ensuring environmental sustainability, and developing a global partnership for development, which constitute the Millennium Development Goals.

The Millennium Declaration and the MDGs represent a solemn commitment to human development by the global community. In asserting this commitment the member states of the UN also committed to producing periodic MDG reports at country level charting progress and achievements in reaching the goals. UNDP attaches great importance to the preparation of such reports, since they not only fulfil the commitment entered into by the Heads of State and Government at the Millennium Summit, but more importantly operationalize that commitment through these periodic MDG reports that serve as advocacy tools, and assess and benchmark progress in achieving the goals. The Administrator of UNDP in his capacity as Chair of the UN Development Group has been given the responsibility by the UN Secretary-General to perform the role of 'scorekeeper', and in turn has charged UN Country Teams globally to support countries in which they serve in the preparation of their MDG reports. To date, quite a number of countries in Latin America and the Caribbean have produced at least one MDG report.

This MDG Report for the Caribbean Community is the product of a close and fruitful collaboration between the Caribbean Oversight and Support Centre (COSC), RBLAC/UNDP and the University of the West Indies, Mona, Jamaica. In this regard, UNDP is pleased to register its complete satisfaction with not only the quality of the report but also the excellent relationship solidified in the process. This MDG Report is yet another manifestation of the inherent capacity of Caribbean intellectuals and professionals to produce quality work and fully justifies UNDP's strategy and commitment to work with local and regional experts to build indigenous capacity to produce such reports and to own the process and results.

The MDG Report for the Caribbean Community is also the product of inputs and insights provided by a broad array of regional and international partners and collaborators. Comments on successive drafts were received from our regional colleagues in the Economic Commission for Latin America and the Caribbean (ECLAC), the Inter-American Development Bank (IDB) the World Bank, the CARICOM Secretariat, other UN agency colleagues, and staff in UNDP offices in the region. The report itself is based on the important work done at country level in the preparation of MDG Reports and other official reports and statistical publications for Barbados, the countries of the Organization of Eastern Caribbean States (OECS), Guyana, Haiti, Jamaica, Suriname and Trinidad and Tobago. This was at times a Herculean task since as the authors note at several points in the report, there is a lack of consistent data on some of the goals, and a consequent need to strengthen statistical and data collection and compilation capacities throughout the region. This is indeed a most critical need and is indispensable for building the capacity to monitor, assess and benchmark progress in achieving the goals.

As the report reveals, the scorecard in achieving the MDGs in the Caribbean Community is indeed a mixed albeit a hopeful one. The poverty eradication goal seems attainable, although much greater effort, political commitment and outlay of resources will be needed in especially the poorer countries in the region. Universal primary education is within reach in most countries although issues of quality and relevance need to be addressed. The region is far advanced in achieving gender equality and empowerment of women, although significant deficits exist and the report raises questions on the relevance of the standard targets and indicators. Reducing child and infant mortality seems attainable in most of the countries, provided that they experience no major setback. In contrast, the

goal of reducing maternal mortality is in danger of not being met in quite a few countries due to structural and other factors.

The regional response to HIV/AIDS in recent years is encouraging, but several countries will need significant attention to prevention programmes and investment in care and treatment if the goal is to be achieved. The Caribbean is significantly challenged by deforestation, watershed degradation, waste disposal and energy conservation. But by far, its greatest challenges result from climate change and destruction of coral reefs, which will require sustained attention. And finally, the goal of developing a global partnership for development premised on an open, rule-based, predictable and non-discriminatory trading and financial systems, is very much in doubt and is ultimately subject to progress in moving global negotiations in the World Trade Organisation (WTO) and other multi- and bi-lateral fora.

The Caribbean Community has much to celebrate, although some of its members also have much work to be done in achieving the MDGs. The purpose of this Report is not to celebrate those who are making progress and to bemoan those who seemingly lag behind. Rather, its purpose is to compassionately record where the countries of the region stand today, to identify gaps and areas where greater effort is needed, and to suggest policies and programmes that would conduce to achieving the goals. Insofar as it has done so, this Caribbean MDG Report has achieved its purpose. I therefore commend it to the government and peoples of the Caribbean Community and wish you every success in the ultimate goal of creating a sustainable future for all.

Elena Martinez
Assistant Administrator and Regional Director
Regional Bureau for Latin America and the Caribbean
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Foreword

The Millennium Development Goals represent an important international compact on development, built upon the experience of past efforts to advance the well being of the people of the developing world. They reflect the determination of the international community to identify practical development targets that can be realised within a specified time frame and which are also subject to both qualitative and quantitative assessment. Although the MDGs do not encompass the totality of the development effort, they nevertheless serve to focus attention on a number of central issues of direct relevance to the developing countries.

In the case of the Caribbean, all of the goals are critically relevant to the development aspirations of the people of the region. Poverty eradication has become a central element in the overall development equation fashioned by Caribbean policy makers, while education, gender and the various aspects of health encompassed in the relevant goals, represent issues to be addressed on a priority basis. Similarly, there is growing appreciation in the region that a strategy of environmental sustainability is an essential prerequisite for the preservation of the environment for succeeding generations. Finally, the construction of an effective partnership based on principles of equity is indispensable to the achievement of the preceding goals.

The University of the West Indies is pleased to collaborate with UNDP in the preparation of this regional report which assesses progress made towards the achievement of the Millennium Development Goals in the Caribbean Community. I am confident that the excellent working relationship established with the Caribbean Oversight and Support Centre in the Regional Bureau for Latin America and the Caribbean in UNDP, notably with Mr. Thomas Gittens, the Programme Manager of the Centre, and his predecessor, Mr. Christopher Hackett, in the preparation of the report, provides a sound basis for continued collaboration between UWI and UNDP in the future in addressing issues relevant to the development needs of the Caribbean.

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Acknowledgements

The preparation of this report was made possible through the contributions of a team of scholars and researchers from the University of the West Indies, Mona, Jamaica. This team, which was co-ordinated by Professor Denis Benn, has produced a report of which we can all be proud. The other members of the team are: Professor Barbara Bailey, Professor Brendan Bain, Professor Anthony Clayton, Professor Neville Duncan, Dr. Affette McCaw-Binns, Professor Errol Miller, Dr. Maureen Samms-Vaughan and Dr. Michael Witter. The members of the team were chosen for their known expertise and each member undertook the research and produced a chapter on one of the MDGs. Professor Benn as team leader co-ordinated the preparation of each of the chapters on the MDGs, ensured quality and consistency of analysis, undertook the preparation of the introductory and concluding chapters, and edited the report for consistent presentation style and coherence. The team which was ably supported by Ms. Diane West, Administrative Officer in the Office of the Michael Manley Professor of Public Affairs/Public Policy, UWI, Mona, is to be commended for a fine effort, notwithstanding the challenges of paucity of data, and often inconsistent data sources encountered.

The report benefited from the incisive scrutiny of a number of readers. Comments on successive drafts of the report were received from colleagues from the Inter-American Development Bank, the Economic Commission for Latin America and the Caribbean, and the World Bank as part of the inter-institutional collaboration with RBLAC, UNDP, for ensuring quality MDG reports in the LAC region. UNDP wishes to extend heartfelt thanks to these colleagues who gave unselfishly of their time.

The report also benefited from the comments and suggestions of a large number of staff from country offices in the Caribbean region. Special thanks go to Philippe Rouzier, Haiti, Charmaine Gomes, Trinidad and Tobago, Max Ooft, Suriname, Rebeca Arias, Barbados, Denise DeSouza, Guyana, Juan Carlos Espinola, Jamaica, and Tessa Best, Caribbean SURF, who took time out to read the successive drafts and in the final stages to provide valuable comments on the cover design for the report. Special thanks also go to Enrique Ganuza, Focal Point for the MDGs in the Regional Bureau for Latin America and the Caribbean, who not only read and commented on the drafts of the report, but also provided useful advice during its preparation; and to Cristina Fasano, Programme Assistant, RBLAC who provided valuable administrative and liaison support during the process. This was a truly collaborative effort and contributed in no small way to the quality and accuracy of the analysis for individual countries and at the regional level. It also bears ample testimony to the fact that UNDP's greatest strength lies in the excellent human resources available in its country offices scattered around the globe.

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It would be highly remiss not to extend special thanks and appreciation to Ambassador Christopher Hackett, former Co-ordinator, Caribbean Oversight and Support Centre, RBLAC, UNDP, who was the driving force behind the decision to prepare this report, negotiated the partnership with the team from UWI, Mona, and who secured the funding to prepare the report. Last but not least, thanks and appreciation must go to Mr. Mark Malloch Brown, Administrator, UNDP and Ms. Elena Martinez, Regional Director, RBLAC for their vision, advocacy and support for the preparation of country and regional MDG reports.

Thomas W. Gittens
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Acronyms and Abbreviations

ACP-EU	-	Africa, Caribbean and Pacific - European Union
ACS	-	Association of Caribbean States
AIDS	-	Acquired Immune Deficiency Syndrome
ART	-	Anti-Retroviral Therapy
ARVs	-	Anti-Retroviral Drugs
CAREC	-	Caribbean Epidemiology Centre
CARICOM	-	Caribbean Community
CARIFORUM	-	Caribbean Forum
CBI	-	Caribbean Basin Initiative
CBTPA	-	Caribbean Basin Trade Partnership Act
CCC	-	Caribbean Conference of Churches
CCNAPC	-	Coalition of Caribbean National AIDS Programme Co-ordinators
CDB	-	Caribbean Development Bank
CDCC	-	Caribbean Development and Co-operation Committee
CDCGAP	-	Centres for Disease Control and Prevention Global AIDS Programme
CDI	-	Commitment to Development Index
CETT	-	Centre for Teacher Training
CFCs	-	Chloro-Fluoro Carbons
CHART	-	Caribbean HIV/AIDS Regional Training
CHRC	-	Caribbean Health Research Council
CIDA	-	Canadian International Development Agency
CO^2	-	Carbon Dioxide
COHSOD	-	Council for Human and Social Development
CRN+	-	Caribbean Network (of HIV seropositive persons)
CRNM	-	Caribbean Regional Negotiating Machinery
CSME	-	Caribbean Single Market and Economy
DAC	-	Development Assistance Committee

ECLAC	-	Economic Commission for Latin America and the Caribbean
EFA	-	Education For All
EPA	-	Economic Partnership Agreement
EU	-	European Union
FAO	-	Food and Agriculture Organisation of the United Nations
FDI	-	Foreign Direct Investment
FGT	-	Foster-Greer-Thorbecke (Measure)
FTAA	-	Free Trade Area of the Americas
GDI	-	Gender Related Development Index
GDP	-	Gross Domestic Product
GEM	-	Gender Empowerment Index
GEO	-	Global Environment Outlook
GFTAM	-	Global Fund against AIDS, Tuberculosis and Malaria
GIS	-	Geological Information Surveillance System
GPIs	-	Gender Parity Indices
GTZ	-	Deutsche Gesellshaft fur Technische Zussamenarbeit
HDI	-	Human Development Index
HIB	-	Haemophilus Influenza Type B
HIPC	-	Highly Indebted Poor Countries
HIV	-	Human Immunodeficiency Virus
HRSA	-	Health Resources and Services Administration (US)
IDB	-	Inter-American Development Bank
IMF	-	International Monetary Fund
IMR	-	Infant Mortality Rates
IPCC	-	Intergovernmental Panel on Climate Change
ISDR	-	International Strategy Disaster Reduction
I-TECH	-	International Training and Education Centre for HIV/AIDS
M&E	-	Monitor and Evaluate (Processes and Programmes)
MDG	-	Millennium Development Goals
MMR	-	Maternal Mortality Rate
NGO	-	Non-Governmental Organisations
ODA	-	Official Development Assistance
ODP	-	Ozone Depleting Potential

OECD	-	Organisation for Co-operation in Economic Development
OECS	-	Organisation for Eastern Caribbean States
PAHO	-	Pan American Health Organisation
PANCAP	-	Pan Caribbean Partnership Against AIDS
PEPFAR	-	President's Emergency Plan for AIDS Relief (US)
PIOJ	-	Planning Institute of Jamaica
PLWHA	-	Persons Living With HIV/AIDS
PMTCT	-	Prevention of Mother to Child Transmission
PPP	-	Purchasing Power Parity
PRSP	-	Poverty Reduction Strategy Paper
RAMOS	-	Reproductive Age Mortality Surveys
SDT	-	Special and Differential Treatment
SIDS	-	Small Island Developing States
SOE	-	State of Environment (Report)
STIs	-	Sexually Transmitted Infections
TFR	-	Total Fertility Rates
U5MR	-	Under 5 Mortality Rates
UN	-	United Nations
UNAIDS	-	The Joint United Nations Programme on HIV/AIDS
UNDAF	-	United Nations Development Assistance Framework
UNDP	-	United Nations Development Programme
UNEP	-	United Nations Environment Programme
UNESCO	-	United Nations Educational, Scientific and Cultural Organisation
UNFPA	-	United Nations Population Fund
UNICEF	-	United Nations Children's Fund
UNIFEM	-	United Nations Development Fund for Women
USAID	-	United States Agency for International Development
UWI	-	University of the West Indies
VCCT	-	Voluntary Confidential Counselling and Testing
WHO	-	World Health Organisation
WSSD	-	World Summit on Sustainable Development
WTO	-	World Trade Organisation

Contents

Executive Summary

Since their adoption in 2000, the Millennium Development Goals (MDGs) have served as an important instrument for orienting development policy in the Caribbean region towards the achievement of a number of specific goals and targets. Indeed a number of countries in the region, notably Guyana, Jamaica and members of the Organisation of Eastern Caribbean States (OECS), have prepared reports indicating progress made at the national level towards the achievement of the various Goals.

The present study identifies broad trends relevant to the achievement of the MDGs at the regional level and highlights issues deriving from the peculiarities of the Caribbean Community which, in addition to its mainland members, namely, Belize, Guyana and Suriname, comprises a large number of small island developing countries striving to promote deeper forms of economic integration and co-operation.

The comparative perspective of the study facilitates the identification of similarities and differences among countries of the region and also highlights successful strategies and approaches which could be replicated in other countries encountering problems in achieving the MDGs. It also identifies challenges and obstacles in the way of achieving the MDGs and advances policy and other recommendations to address these challenges and obstacles. In addition, it makes a number of specific proposals for the modification of the targets to meet the needs of the Caribbean situation. Based on a situational analysis of the various goals across the region, the following trends are discerned.

In the case of the *eradication of poverty and extreme hunger*, despite the fact that a number of countries in the region have achieved a high rank on the human development index (HDI), there are still significant pockets of poverty in several countries, notably, Guyana, Haiti and Jamaica. The poverty profile of the region indicates that there is considerable variation and unevenness among the various countries. Moreover, with the exception of Barbados, the majority of the poor live in the rural areas. In addition, the Gini coefficient is relatively high in some countries, compared to others, indicating significant disparities in the distribution of wealth in these societies. However, the problem of hunger, as an extreme form of poverty, is not as severe as in many other parts of the world. The goal of halving poverty in the Caribbean by the year 2015 can therefore be met with the necessary political will and the adoption of appropriate policies.

If performance regarding access to *universal primary education* is judged in relation to the resources provided, Caribbean countries perform better than many middle income countries. Nevertheless, there is clearly room for further improvement in the educational system. Improvements in performance will require changes in the existing organisation of primary schooling, the level of teacher training, instructional technology and the provision of additional financial resources. Efforts are continuing to improve the indicators required in order to ensure effective measurement of primary enrolment. Similarly, recommendations have been made, based on technical surveys, for the English-Speaking countries of the region to adopt common standards for reading at the primary level. It is felt that, given the current trends in primary education, the MDG goal in this area will be achieved in the Caribbean. It is proposed nevertheless that, given the realities of the Caribbean, the targets under this goal should be revised to reflect stipulated enrolment levels in primary, secondary and tertiary education.

The unavailability in most instances of sex disaggregated data in the relevant age cohort (15-24 years) makes it difficult to document the measures of *gender equality and women's empowerment*. This not only hinders analysis but also points to the need for the adoption of a common approach on system structure, definitions of key indicators and, at a minimum, the mandatory collection of sex disaggregated data on an annual basis. However, based on the available data, with the exception of Belize, enrolment rates at the primary level favour boys, while at the secondary level they favour girls.

The *ratio of literate females to males* (indicator 2) among 15-25 year olds generally favours females, given the higher rate of female participation at the secondary level of education.

Only in St. Lucia is there parity in the share of women in wage employment in the non-agricultural sector (indicator 3). In all other cases, males have the larger share of employment, with the gap being widest in Suriname, Guyana and Trinidad and Tobago.

The *proportion of seats held by women in national parliaments* (indicator 4), in the seven countries for which data are available, is highest in the Upper House or Senate but, in the Lower House and in the cabinet, representation is well below the 30 percent minimum target proposed by the Commonwealth Ministers Responsible for Women's Affairs at their 1996 meeting in Trinidad and Tobago.

However, the report raises a larger question regarding the relevance and utility for the Caribbean of the indicators established under this Goal and concludes that it will be necessary to add more qualitative and relevant quantitative measures in order to contextualise the targets and indicators and thus make them more relevant to the realities of the Caribbean. A number of specific proposals are advanced in this regard.

In the important area of *reduction of child mortality*, no Caribbean country falls within the 'very high' category of Under Five Mortality Rates (U5MR) (i.e. over 140 per 1000 births), and only Guyana and Haiti fall within the 'high' category (i.e. between 71 and 140 per 1000 births). In this context, it is observed that the lack of adequate access to health care is an important factor in the high U5MR in the region. It is noted that in order to achieve a decrease in U5MR by two thirds in 2015, a minimum reduction of 27 percent between 1990 and 2000 would have been necessary. Fifteen countries for which data are available have achieved this goal. Extrapolating from this trend, these countries are therefore likely to achieve the target by 2015.

On the specific issue of *infant mortality*, as distinct from the broader category of child mortality, Caribbean countries rank among those with both the highest and lowest infant mortality rate (IMR) in the region, reflecting the wide variations in IMR among countries. The countries with the highest IMR are also those with a high U5MR and, correspondingly, the countries with the lowest IMR are also those with the lowest U5MR.

Immunisation from measles is one of the targets established under the goal to eradicate communicable diseases in children. A majority of countries covered by the study have achieved the recommended level of immunisation, namely, a 90 percent rate of immunisation for children under one year. Of the seven countries with rates less than 90 percent, four are well on the way with immunisation rates at or above 85 percent, with two at 89 percent. The three countries with the lowest immunisation rates (Haiti, Belize and Suriname) are also among those with high U5MR and IMR, thus underlining the fact that inadequate access to health services is a significant contributor to child mortality in these countries.

Regarding maternal health, among the larger countries of the region, maternal mortality ratios range from 60 in Barbados to 170/100,000 live births in Guyana. The one outlier is Haiti with an estimated ratio of 680/100,000 live births. Compared to the 1995 WHO estimates, rates for 2000 were estimated as being higher for Bahamas, Barbados, Guyana, Haiti and Trinidad and Tobago. The region faces the paradoxical situation in which high rates of skilled attendance (with the exception of Belize and Haiti), have not translated in the expected improved outcomes for mothers and their infants. Based on current estimates, the region may therefore not achieve the MDG goal of reducing maternal mortality by 75 percent by 2015.

The Caribbean (including Cuba and the Dominican Republic) is seriously affected by HIV/AIDS with an overall estimated prevalence rate in 2003 between 1.4 percent and 4.1 percent and between 410,000 and 720,000 adults and more than 20,000 children throughout the region living with the disease. However, the statistics indicate a wide variation in prevalence within the region, ranging from a high of 5.6 percent in Haiti to 1.2 percent in Jamaica.

The formulation of a Caribbean Regional Strategy Plan of Action for HIV/AIDS and the establishment of a Pan-Caribbean Partnership against AIDS (PANCAP) have enabled the region, with the support of external donors, to respond to the epidemic both in terms of education programmes and the introduction of effective therapies. Moreover, the region is continuing to negotiate lower prices for anti-retroviral drugs (ARVs). In addition, production facilities for the manufacture of these drugs are being established, notably in Guyana.

Some countries such as Bahamas, Barbados, Haiti and Jamaica are already beginning to report progress towards the target to 'halt and begin to reverse the spread of HIV/AIDS, the incidence of malaria and other major diseases by the year 2015'. The last three countries are reporting a slowing of the rate of increase of HIV/AIDS cases, while the data from the Bahamas show a decline in the number of newly reported cases.

Malaria remains endemic in the mainland countries such as Guyana, but has been eradicated from local populations in all of the islands except Haiti. Eliminating malaria from the mainland countries presents a special challenge because of the difficulty involved in ensuring effective mosquito control in the hinterland regions of a vast territory which are often quite isolated.

The *incidence and prevalence of tuberculosis* vary widely across the Caribbean, with the highest documented prevalence in Haiti and Guyana. The interaction between tuberculosis and HIV/AIDS makes it imperative for all Caribbean countries to develop operational plans to treat both diseases.

On the issue of *environmental sustainability*, the countries of the region face a number of important problems, including deforestation, watershed degradation, waste disposal and energy conservation, although there are marked variations among countries in respect of the severity of these problems. However, despite the importance of these issues, it is felt that the priorities to be tackled under the goal of environmental sustainability should focus on issues relating to climate change and the protection of coral reefs since they are considered critical to the continued viability to the countries of the region. It is proposed therefore that the targets for this goal should be revised accordingly to take account of the realities of the region.

The establishment of a *global partnership for development*, is premised on an open, rule-based, predictable, non-discriminatory trading and financial system. While the Caribbean countries subscribe to increased liberalisation, they have asserted in the various multilateral trade negotiations carried out within the World Trade Organisation (WTO), the ACP-EU Cotonou Agreement and in respect of the proposed Free Trade Area of the Americas (FTAA), the need for special and differential treatment (SDT) to be accorded them in view of their small size and relative underdevelopment. They have also sought to strengthen their collective negotiating capacity through the establishment of the Caribbean Regional Negotiating Machinery (CRNM) which is designed to provide substantive analysis in support of the negotiating process and also to participate actively in the actual negotiations.

In the partnership, emphasis is also placed on the need for an increased level of ODA, estimated at between US$50-$100 billion, to support efforts aimed at the achievement of the MDGs globally. However, although an increase in ODA is projected in 2004, it is extremely unlikely that this increase will be of a sufficient magnitude to reach the target. In the specific case of the Caribbean, ODA decreased from approximately US$1.2 billion in 1995 to US$400 million in 2002 as some traditional donors sought to meet new obligations in other parts of the world, notably Afghanistan and Iraq. For this reason the proposal contained in 2003 UNDP Human Development Report for the establishment of a Commitment to Development Index (CDI) in order to monitor how well the developed countries and other international development partners live up to their commitment under the global partnership, is extremely timely.

More generally, the report highlights a number of issues which are considered relevant to the implementation of the MDGs in the Caribbean context. It emphasises the need for increased attention to be paid to the current efforts of the region to intensify the process of economic integration in the context of the Caribbean Single Market and Economy (CSME) with special reference to the possibilities for promoting production integration based on factor complementarity. The regional dimension is also emphasised in view of the existence of a SIDS platform for the Caribbean and the proposed Barbados +10 Conference to be held in January 2005.

Emphasis is also placed on the importance of ensuring the availability of adequate, and suitably disaggregated, statistics as an essential precondition for the effective achievement of the MDGs and the need therefore to strengthen data collection capabilities in the region.

The effective integration of the MDGs into the national planning framework is seen as an essential precondition for their successful implementation. Moreover, it will be necessary to establish systematic linkages among the various goals since, although they are listed separately, they are nevertheless closely inter-related. In this regard the UN Development Assistance Framework (UNDAF) could provide a useful framework at the country level for ensuring systematic linkage among the various goals since although they are listed separately, they are nevertheless closely inter-related. In this regard the UN Development Assistance Framework (UNDAF) could provide a useful framework at the country level for ensuring systematic linkage among the various goals. However, the UNDAF would need to be supplemented by other mechanisms at the regional level in order to ensure an optimal integration of the goals.

Some of the targets and indicators established are not the most relevant for the Caribbean and therefore new targets have been proposed in respect of education, gender equality, and environmental sustainability.

The report provides a number of insights that are intended to assist stakeholders in the region to identify the prerequisites for the achievement of the MDGs in the Caribbean.

Introduction

The Millennium Development Goals which emerged out of the Millennium Declaration adopted at the UN Millennium Summit in 2000, seek to achieve the following eight objectives:

(i) the eradication of extreme poverty and hunger
(ii) the achievement of universal primary education
(iii) the promotion of gender equality and the empowerment of women
(iv) the reduction of child mortality
(v) improvement in maternal health
(vi) combating HIV/AIDS, malaria and other diseases
(vii) ensuring environmental sustainability
(viii) the development of a global partnership for development

There are eighteen corresponding targets and some forty-eight indicators designed to measure progress towards the achievement of the various goals during the period 1990 -2015 (see Annex I).

The MDGs constitute a comprehensive, time bound, framework for promoting and measuring specific aspects of development and, since their adoption, governments have been encouraged to use them to guide the formulation of national development policy.

The present report seeks to identify broad trends relevant to the achievement of the MDGs at the regional level in the specific circumstances of the Caribbean. It adopts a comparative perspective which facilitates the identification of similarities and differences among countries of the region and also highlights successful strategies and approaches which could be replicated in other countries encountering problems in achieving the MDGs. It also identifies challenges and obstacles in the way of achieving the MDGs and makes recommendations to address these challenges and obstacles. In addition, it contains a number of specific proposals for the modification of some of the targets and indicators specified in respect of particular goals.

Since the prospects for the attainment of the targets stipulated in the various MDGs are not unrelated to the development fortunes of the region, it is important to provide, by way of a backdrop, a brief summary of the major development challenges facing the region.

Despite relatively high per capita incomes and fairly high rankings on the Human Development Index (HDI), a number of countries in the Caribbean Community (CARICOM), which is the focus of this report, are currently experiencing sluggish growth, persistent unemployment, particularly among youth and women, and the entrenchment of significant pockets of poverty. Even some of the countries of the Organisation of Eastern Caribbean States (OECS) which during the 1980s achieved conspicuously high levels of growth, have begun to experience declining levels of growth, based on a weakening of certain economic sectors, notably bananas, which is complicated by the fact that they are now required to compete in an increasingly liberalised global trading system. Countries such as Guyana and Jamaica are also saddled with a heavy debt burden which has had a negative impact on their development and, in particular, on their capacity to increase investment in the social sector.

Many of the small island states of the Community are ecologically fragile and are susceptible to natural hazards such as hurricanes, earthquakes, volcanoes and floods, which have over the years resulted in the loss of life and caused significant damage to economic infrastructure.

The development challenges facing the countries of the region are compounded by the need for them to carry out negotiations simultaneously in three separate forums, namely, the World Trade Organisation (WTO), the proposed Free Trade Area of the Americas (FTAA), and the ACP-EU Cotonou Agreement. While the Caribbean countries are committed to trade liberalisation, they continue to emphasise the need to preserve the principle of special and differential treatment in order to safeguard their economic interests since they believe that unqualified competition among unequals, based on disparities in levels of development between themselves and the developed countries, would be inimical to their interests.

Since the mid 1990s there has been a noticeable decline in ODA to the region, partly as a result of its relatively high per capita GNP and its declining geopolitical significance following the end of the Cold War, although some countries such as Jamaica, have attracted an increased level of foreign direct investment.

In an effort to increase their bargaining power in the various negotiations and in order to optimise their development possibilities, the countries of the region have sought to intensify the process of economic integration, as is exemplified by the decision to establish a Caribbean Single Market and Economy (CSME).

In seeking to promote the MDGs, the Caribbean countries are committed to pursuing a strategy aimed at stimulating growth, generating employment and eradicating poverty which continue to be major challenges in many countries in the region.

Recent assessments of progress at the global level in terms of the achievement of the MDGs indicate a mixed picture in which some countries and regions have achieved progress, while a number of others continue to lag behind. Indeed, the 2003 UNDP Human Development Report which focuses on the MDGs, has identified thirty one 'top priority' and twenty-eight 'high priority' countries, located mainly in Sub-Saharan Africa, which continue to require urgent attention if they are to make progress toward the achievement of the MDGs.

In the case of the Caribbean, a number of countries, namely, Guyana, Jamaica and the member states of the Organisation of the Eastern Caribbean States (OECS), which have opted for the preparation of a joint report, have completed national MDG reports.

These reports have proved useful in pointing to the specific realities of the Caribbean which are often inadequately dealt with in global reports such as the 2003 UNDP Human Development Report which, in some respects, makes only limited reference to these countries, largely because of the absence of the requisite data.

The present report, which has been prepared by a group of experts drawn from various disciplines within the University of the West Indies, is based on relevant research being carried out within the University and also on documentation produced by regional institutions and by various organisations and agencies of the UN system.

The report, which has also benefited from the analysis contained in the national reports, seeks to identify broad trends in the implementation of the MDGs at the regional level, highlighting in the process, the peculiarities of the region which comprise a large number of small island developing countries and territories striving to promote deeper forms of integration in the context of the Caribbean Community (CARICOM) and also wider co-operation arrangements in the form of the Association of Caribbean States (ACS), all of which exercise an important influence on the prospects for achieving the MDGs. In addition, the report has benefited from the very constructive comments provided by various persons within UNDP, UNIFEM and other UN organisations and agencies as well as from the World Bank, the Inter-American Development Bank (IDB) and the Economic Commission for Latin America and the Caribbean (ECLAC). The comparative perspective of the study provides a framework for assessing the approaches adopted by the different countries and on this basis to identify successful strategies that could be applied by other countries in the region. It also provides a basis for cross-regional comparison.

It should be mentioned that the study is also informed by the deliberations and conclusions which emanated from the Regional Consultations on the MDGs and Sustainable Development held in Barbados in July 2003 which brought together a wide range of participants from government, the private sector and the NGO community to exchange views on the subject.

The report is designed to complement the various national reports and is intended to serve as an instrument to promote advocacy and consensus building and thus motivate decision makers in government, the private sector and civil society to recommit to themselves to the achievement of the MDGs and to build an appropriate capacity for promoting and reporting on progress made towards the achievement of these goals.

Against this background, the following sections of the report provide a situational analysis of progress made under the various goals and, on this basis, assess the prospects of achieving the targets specified in them.

SITUATIONAL ANALYSIS AND ASSESSMENT OF PROGRESS MADE TOWARD THE ACHIEVEMENT OF THE MILLENNIUM DEVELOPMENT GOALS

Eradication of Extreme Poverty and Hunger

Introduction

Poverty is not new to the Caribbean, although new forms of poverty exist along with old forms. In recent years, the struggle to eradicate poverty seems to have faltered and is in danger of reversal in the context of far-reaching global political and economic changes. The climb out of poverty has become much more difficult with the tapering off of the post World War II economic expansion, and correspondingly the slide into poverty has become easier as the Caribbean attempts to structurally adjust to its growing marginalisation in of the world economy. With the weakening of demand for primary commodity exports, traditional agriculture is in decline and shedding labour. New industries supplying niches of comparative advantage are not emerging fast enough to generate levels of employment capable of absorbing the available labour.

Not surprisingly, the regional picture of poverty is one of unevenness across countries, across regions within countries, and across age groups, occupations, and social classes, especially where regions are characterized by the dominance of particular ethnic groups. In Guyana, for example, the incidence of poverty varies widely between the urban area of Georgetown and the rural areas, especially the areas in the interior of the country inhabited by the Amerindians where poverty rates are still of the order of 70%. Except for the 10% of the population that is Amerindian, the incidence and depth of poverty were in steady decline throughout the 1990s, though the unevenness persisted across regions. A similar pattern is evident in Belize.

Although 50% of the population of Jamaica live in the urban areas, compared to Guyana which is predominantly rural, the same pattern of a higher incidence and a greater depth of poverty in the rural areas compared to the urban areas has been reported by all the studies of poverty carried out in the 1990s. Barbados is the only country where the incidence of poverty is higher in the urban than in the rural areas.

Caricom governments uniformly had committed themselves to poverty alleviation, and, in many cases, to poverty eradication, as a major policy goal, even before the Millennium Development Goals were adopted. For example, the government of Barbados established a Ministry of Social Transformation with a Poverty Alleviation Bureau in 1998, while Jamaica has been implementing a National Poverty Eradication Programme since 1995.

Monitoring the achievement of the first Millennium Development Goal

Against the background of the preceding broad historical overview, this chapter examines the progress in the Caricom sub-region in achieving the targets set out in MDG 1 namely, to "Eradicate extreme poverty and hunger". As in some other regions of the developing world, monitoring the progress of the Caribbean in halving poverty rates and achieving the other MDGs is severely constrained by the lack of adequate, reliable and timely data. In recognition of this need, ECLAC has launched a project to develop a statistical database to monitor social progress in the region. This study has compiled data from the databases of the United Nations agencies and the World Bank, and from reports prepared by regional institutions such as the Caribbean Development Bank (CDB) as well as national statistical offices, but significant gaps remain in the data available for the region.

As shown in **Table 1**, two targets were specified for MDG 1, with four indicators recommended for the first target and two indicators for the second target.

Table 1: Targets and Indicators for the MDG –1

Targets	Indicators
Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one US dollar a day	***1.*** Proportion of population below $1 (PPP) per day *2.* Poverty Headcount ratio (% of population below national poverty line) *3.* Poverty Gap ratio (incidence x depth of poverty) *4.* Share of poorest quintile in national consumption
Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	*1.* Prevalence of underweight children under five years of age *2.* Proportion of population below minimum dietary energy consumption

Source: United Nations Development Group, Indicators for Monitoring the Millennium Development Goals, p. 3

Beginning in the late 1980s, several estimates of the incidence, prevalence and depth of poverty have been made in the region, providing a better, if not complete, understanding of the various dimensions of poverty. However, there is still a shortage of studies on the dynamics of poverty, indicating how people fall into poverty, and how they escape from this condition, since snapshots of poverty at specific points in time are usually insufficient to monitor the changes in poverty over time.

Target 1 – Halve, between 1990 and 2015, the proportion of people whose income is less than US$1.00 (PPP) per day

Table 2 presents the most recent statistical description of poverty in the region, highlighting the first three indicators in **Table 1** above. These are the percentage of the population consuming less than $1.00 per day, the poverty Head Count and the Poverty Gap at $1.00 per day. In addition, there is a second version of the Poverty Gap defined with respect to the national poverty line, a measure of the severity of poverty, and the percentage of the population below a level of income that can just afford the minimum dietary energy requirements known as the indigence line.

Table 2: Profile of Poverty in Selected Caribbean Countries

Country	*% below US$1[1] line*	*Poverty Gap at $1 per day*	*% below poverty line*	*Poverty Gap for poverty line*	*FGT P2 (severity)*	*% below Indigence line*
Antigua and Barbuda - early1990s	na	na	12.0	na	na	na
Bahamas - early 1990s	na	na	5.0	na	na	na
Barbados -1997	na	na	13.9	2.3	na	na
Belize - 1996	na	na	33.0	8.7	4.3	13.4
Dominica - 2002	na	na	39.0	10.2	na	15.0
Grenada - 1999	4.7	na	32.1	15.3	9.9	12.9
Guyana - 1999	<2	na	35.0	12.4	na	19.0
Haiti - 1995	na	na	81.0	na	na	66.0
Jamaica - 1999	na	4.4	19.7 (2002)[2]	na	na	na
St. Kitts – Nevis - 2000	na	na	31.2	2.6[3]	1	14.0
St. Lucia - 1996	2.97	na	25.1	8.6	4.4	7.1
Suriname - 1993	na	na	77.0	na	na	na
St. Vincent & the Grenadines - 1996	5.5	na	37.5	12.6	6.9	25.7
Trinidad & Tobago -1992	12.4	na	21.2	na	na	11.2

Source: Thomas and Wint, 2002 citing Country Poverty Assessment studies conducted by the Caribbean Development Bank; Downes et al, 2003; Andrews, 2003; ECLAC, 2003;World Bank, Global Poverty Monitoring; World Bank, http://www.developmentgoals.org/Data.htm,; World Bank, 2000; ECLAC Report entitled Social Panorama of Latin America, 2002-2003

Indicator 1- Percentage of the population below $1(PPP) per day

The percentage of the population below the US$1(PPP) a day line is available for only a few countries and only for different years. The analysis therefore recognises the limitation imposed by this reality in terms of comparison among the countries involved. However bearing in mind this limitation, except for Trinidad and Tobago, which seems anomalous even for 1992, because of the level of its overall development and its high per capita GDP, the estimate is below 6%. The target is to reduce these rates to 1% - 6% by 2015

Indicator 2- Percentage of the population below the national poverty line

Estimates of the Head Count ratio have been prepared in various Country Poverty Assessment studies conducted by the Caribbean Development Bank (CDB) during the 1990s as well as Living Standards Measurement Surveys funded by the World Bank but these were done for different years in the different countries, which imposes a limitation in terms of comparison among countries. However, allowing for this limitation, the incidence of poverty ranges from a low of 13.9% in Barbados in 1997 to a high of 81% in Haiti in 1995. Except for Barbados and Jamaica, the incidence of poverty in all the other countries in **Table 2** was above 20%, and for eight of the fourteen countries, it was above 30%.

Jamaica is the only country with a series of annual estimates from 1989 to 2002. In 1990, it was 28.4%, rose to its peak of 44.6% in 1991, but has declined steadily since then. In 2001, it was almost half of what it was in 1990, but in 2002 it rose again to 19.7%. A target of 14%-15% in 2015 nevertheless seems achievable.

In Guyana, absolute poverty, as measured by the Head Count, declined from 42% to 35% between 1992 and 1999. During the same period, the incidence of indigence declined from 28% to 19%[4]. At these rates of decline, Guyana can also achieve the target of halving poverty by 2015. The challenge is for Guyana to maintain the robust growth that it enjoyed in the 1990s by averaging a 5%-6% rate of growth annually in the years approaching 2015.

For the Caribbean to meet the first target of MDG-1, it must reduce the Head Count measure of the incidence of poverty to 10%-18% by 2015. While there are countries whose indicators seem to be moving in the right direction, there is insufficient data at this time to conclude that there is a general trend in the region toward achieving this target.

Indicator 3- Poverty gap

Estimates of the Poverty Gap with respect to $1.00 (PPP) per day are reported for Jamaica (1999) only. For Jamaica, the Poverty Gap with respect to the national poverty line declined from 7.9% in 1990 to 4.4% in 1999, which means that by this indicator of the MDG 1, the target has already been achieved. Estimates of the Poverty Gap with respect to national poverty lines are reported for eight countries. With regard to the second version of the poverty gap indicator, countries with a high incidence of poverty – Grenada, Guyana and St. Vincent and the Grenadines – also reported very high poverty Head Count percentages. In the case of Guyana, however, the estimate of the Poverty Gap declined from 16% in 1992 to 12.4% in 1999.

Table 2 also presents estimates of the severity of poverty and the incidence of indigence for countries for which data are available, albeit again for different years, which creates the usual difficulty regarding comparability among the countries concerned. Throughout the region the available estimates of the severity[5] of poverty are all below 10%, with Grenada just marginally below that figure. In the case of the incidence of indigence, of the nine countries for which data are available, only one, St. Lucia, had less than 10% of the population below the indigence line, while Haiti and St. Vincent and the Grenadines, were estimated to have an incidence of indigence of 66% and 25.7%, respectively.

Table 3 presents 2 indicators of inequality in the Caribbean: the share of the poorest quintile in national consumption and the Gini coefficient.

Table 3: Indicators of inequality in Selected Caribbean Countries

Country	*Gini Coefficient*	*% share of income or consumption held by the poorest 20%*
Barbados -1997	0.39	na
Belize - 1996	0.51	na
Dominica - 2002	0.35	na
Grenada - 1999	0.45	na
Guyana - 2001	na	4.5
Jamaica - 2001	0.38	6.7
St. Kitts- Nevis – 2000	0.38	na
St. Lucia - 1996	0.50	5.2
St. Vincent & the Grenadines - 1996	0.56	na
Trinidad & Tobago -1992	0.42/0.40	na

Source: Thomas and Wint, 2002 citing Country Poverty Assessment studies conducted by the Caribbean Development Bank, http://www.developmentgoals.org/Data.htm,

Indicator 4- the share of the poorest quintile in national consumption

The estimates of the share of the poorest quintile in national consumption for the three countries in **Table 3** for which data are available are all low, varying from 4.5% in Guyana to 6.7% in Jamaica. Whereas the estimate for St. Lucia is based on 1996 data, the estimates for Guyana and Jamaica are based on data for 2001. In these two latter cases, the statistical picture is therefore current and also facilitates comparison.

In the case of Jamaica for which, there is a series of annual estimates beginning in 1989, there has been no significant change is the estimate of the share of the consumption of the lowest quintile in national consumption.

With regard to the estimates of the Gini coefficient for the nine countries for which data are available, four were less than 40, three were between 40 and 50, and two were above 50.

Taken together, the two indicators suggest that there is considerable inequality of consumption in the region, which is consistent with the estimates of poverty reported in **Tables 2**. It also suggests that progress toward the target will depend on efforts to sustain economic growth and reduce income inequality.

Target 2 – Halve, between 1990 and 2015, the proportion of people who suffer from hunger

Table 4 presents two indicators of hunger in the Caribbean.

Table 4: Indicators of Hunger in Selected Caribbean Countries

	Prevalence of child malnutrition % Children under 5	***Population below minimum dietary energy consumption, %***
Belize - 1990	6.2	na
Guyana - 2001	na	14.0
Jamaica - 2001	3.8	9.0
St. Vincent and the Grenadines - 1995	19.5	na
Trinidad & Tobago - 2001	na	12.0

Source: http://www.developmentgoals.org/Data.htm

Indicator 1- Prevalence of child malnutrition

Table 4 presents estimates of child malnutrition for only three countries. It is apparent that:

- St. Vincent and the Grenadines had a high rate of malnutrition among children under 5 years
- The estimate for Jamaica in 2001 was not only low, but also indicated a decline in the prevalence of malnutrition from 1990 to 2001. However, the rate of decline over the decade of the 1990s was not fast enough to reduce the prevalence to 2.3% - half the rate in 1990 – by 2015.

Indicator 2- Percentage of the population below the minimum dietary energy Consumption

Table 4 has data for only three countries on the percentage of the population below the minimum dietary energy consumption. It appears that while there is a significant percentage of the population in each country facing hunger:

- at the rate of decline experienced during the 1990s, both Guyana and Jamaica can halve the percentage of people facing hunger by 2015. This would mean a rate of 9-10% in Guyana and 7% in Jamaica.
- there has been no significant change in Trinidad and Tobago over the decade of the 1990s, which is again surprising, given the strong growth in that country's economy during that decade.

Progress in the struggle against poverty

One of the most recent studies in the series by Chen & Ravaillon estimated that the percentage of the population in Latin America and the Caribbean below the $1 a day poverty line remained fairly constant, between 15% and 17%, from 1987 to 1998. However, with population growth, the absolute number rose by approximately 15 million persons. Indeed all the measures of poverty they used showed little change in the structure of poverty in the period under review for the Latin American and Caribbean region.

A recent study carried out by UNDP in collaboration with the Economic Commission for Latin America and the Caribbean (ECLAC), showed that projecting the recent (1990s) experience of 18 Latin American countries, seven of these countries would succeed in halving extreme poverty (with respect to the officially adopted international poverty line) by 2015[6]. That is, for these countries, MDG - 1 was achievable. For the other eleven countries in the sample, the study concluded that "---it would not be overly difficult for any of these eleven countries to reach their poverty reduction target, provided they were able to implement policy changes leading to more substantial reductions in their levels of income inequality"[7]. That is, given the necessary political will, poverty could be halved by 2015 by a judicious, country-specific mix of growth and the reduction of income inequality.

In a study completed in 2003, the IDB concluded that, "Progress (in Latin America and the Caribbean) toward [the] goal [of halving the proportion of the population living in extreme poverty by 2015] has been too slow in the past decade[8]."

In its review of the progress toward the MDGs, the UNDP Human Development Report, 2002, estimated the progress of a small group of CARICOM countries for which data was available. **Table 5** below reports these estimates for target 2 of MDG 1, namely, halving, between 1990 and 2015, the proportion of people who suffer from hunger.

Table 5: UNDP estimates of Progress in the Caribbean toward Target 2 of Millennium Development Goal 1

Country for which UNDP had data	*UNDP rating of Progress toward halving people suffering from hunger*
Trinidad & Tobago	Far behind
Suriname	On Track
Jamaica	On Track
Guyana	On Track
Haiti	Lagging

Source: UNDP, Human Development Report, 2002,

Of the five countries listed in **Table 5**, only three namely Guyana, Jamaica and Suriname were "on track" to meet the goal of halving the percentage of the population suffering from hunger. Haiti was adjudged to be lagging. The other country in **Table 5** is Trinidad and Tobago, which on the basis of 1992 figures, was adjudged to be "Far behind". However, based on the strong economic performance by Trinidad and Tobago over the decade of the 1990s, the situation is likely to have improved.

It should be pointed out, nevertheless, that the problem of hunger, as an extreme form of poverty, is not as severe in the Caribbean as it is in many other developing regions of the world. The target of MDG 1 is, therefore, relatively easy to achieve for the Caribbean.

Conclusion

The data in the Caricom Caribbean on the five indicators of the two targets of Millennium Development Goal 1 are sparse and unevenly available across countries. In general, there is more data on the larger countries. For countries such as Jamaica and Guyana

that have had several years of loan programmes with the IMF, the World Bank, and other international financial institutions, there are time series data available on aspects of poverty.

It is clear nevertheless that poverty represents a major challenge in the Caribbean and for this reason has long been recognized as an important policy priority of governments in the region. The adoption of, and commitment to, the MDGs has in some cases strengthened government efforts to eradicate poverty. Of course, there are trade-offs in resource allocation that are often made at the expense of the poverty programmes and in favour of other economic priorities, such as attracting investment to stimulate and sustain economic growth.

While the picture for the region emerging from the data on the indicators is quite mixed, there seems to be a consensus that the goal of halving poverty in the Caricom Caribbean by 2015 can be met, with the requisite political will and the adoption of appropriate policies.

At the present historical juncture, the Caribbean is confronting radical shifts in its international economic relations, and has made progress in adjusting its economies to confront the new challenges. During the decade of the 1990s, some of the countries of the region transformed themselves from primary agricultural producers to service economies, primarily tourism and off-shore financial services, and in the process displaced producers of declining agricultural and manufacturing industries. The challenge is to establish new industries fast enough that can generate income for their employees at rates than keep them above the poverty line.

Universal Primary Education

Introduction

The targets of the second Millennium Development Goals (MDG) are set out in the box below:

GOALS	TARGETS	INDICATORS
Goal 2. Achieve universal primary education	*Target 3: Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling*	∉ Net enrolment ratio in primary education ∉ Proportion of pupils starting grade 1 who reach grade 5 ∉ Literacy rate of 15 to 24-year-olds

The Caribbean and Universal Primary Education

Assessments of primary education in the Caribbean, starting with the World Conference on Education for All (EFA) in Jomtien, Thailand in March 1990, have shown that, with the exception of Haiti, all countries in the Caribbean are on the way to achieving the Second Millennium Development Goal (Miller 1992; 2000). The finding of Downes and Downes (2003) that based on the indicators for MDG 2, it is likely that the countries of the Eastern Caribbean would achieve the goal of universal primary education could be generalised for the entire English Speaking Caribbean and Suriname. Table 1 below shows enrolment data for the Caribbean for 1990 and 1998, as reported as part of the EFA assessment for both Jomtien and Dakar. It should be pointed out that the figures in columns 2 and 3 of Table 1 which suggests that there has been a decline in enrolment between 1990 and 1998 are due to the fact that whereas the enrolment levels represent an actual head count in the schools, the population data for 1998 was based on a projection instead of actual census figures. In reality, however, the population projection was greater than the actual population in 1998, hence the apparent anomaly. The major inference to be drawn from the data presented in the Table is that universal primary education, defined in quantitative terms, has not been the principal challenge of Caribbean primary education system since the world movement on education for all began in 1989.

Table 1

Access to Primary Education in the Caribbean

Countries	Gross Enrolment Primary 1990	Gross Enrolment Primary 1998	Net Enrolment Primary 1998	Compulsory Law: Ages under compulsion
Antigua & Barbuda	na	na	na	na
Bahamas	97.4	99.2	99.2	5-17
Barbados	96.7	101.3	101.3	5-16
Belize		101.3	88.0	5-14
Dominica	100.4	98.9	88.8	5-14
Grenada	na	na	na	na
Guyana	96.9	104.2	91.9	na
Haiti	75.9	126.2	66.3	na
Jamaica	101.3	98.9	92.6	na
Montserrat	100	100	na	5-16
St Kitts & Nevis	102	98	89	5-16
St Lucia	116.7	118.6	na	na
St Vincent & the Grenadines	132	91	84	
Suriname	na	na	na	na
Trinidad &Tobago	124.1	79.6	73.1	na

Extracted from Miller (2000)
(na - Not available)

The point is that the MDG 2, as extracted from the Dakar Declaration on Education for All of 2000, is defined largely in quantitative terms. With the exception of Haiti, Caribbean countries have high net enrolment ratios, high rates of internal efficiency, high rates of participation of girls and high rates of literacy, when literacy is measured in terms of either years of schooling completed or by the functional standard.

The significance of this inference does not reside principally in the recency of the progress that the Caribbean has made in achieving Universal Primary Education but rather in the narrowness of the MDG 2 and its lack of fit with Caribbean realities including the efforts of the governments and people of the region to improve primary education in the context of the Dakar Declaration on Education for All by 2015. The Dakar Declaration not only speaks to the issue of the achievement of universal primary education, measured mainly in quantitative terms, but also to the kind and quality of primary education offered students. Indeed, the goal of universal primary education was one of the principal targets of The World Conference in 1990, which set the date of 2000 as the time for its accomplishment. The carry over to 2015 was mainly due to the modest progress of African and some of the E 9 countries in achieving this target. For Latin America and the Caribbean, the major challenge resided in addressing the issues of the kind and quality of primary education and not universal primary education as defined by MDG 2.

Bearing in mind the strenuous efforts made by the Caribbean to ensure that the kind and quality of primary education were highlighted among the goals of both the Jomtien and Dakar Declaration on Education for All, their omission from the MDG requires some explanation, especially with respect to commitments on the part of the developed countries to fund major components of the MDG. This is a matter that should not be overlooked or glossed over. While the Dakar Declaration on Education for All targets were subject to an elaborate process of global consultation, it is not unfair to say that the process employed in deriving the MDG was far more restrictive, less participatory and much more agency driven. MDG 2 is heavily biased towards the challenges facing African education and education in some of the E 9 countries. For this reason it has little developmental meaning for the Caribbean.

The Challenge Facing the Caribbean

The major developmental challenge facing the Caribbean appears to be that of overcoming the limitations of the existing organisational structure, existing human and financial resources and reliance on traditional technology. It would appear that Caribbean countries are close to the limits of the level of participation and performance that could be reasonably expected of basic education delivered by its existing organisational structure, existing financial and human resources and with the traditional technology. The vast majority of Caribbean countries have levels of provision of, and participation in, basic education that are far beyond those associated with some middle income countries. Further, it would appear that when inputs or outputs are compared, Caribbean countries are efficient users of resources in the provision of basic education. In the EFA assessment that was done by UNESCO, which compared levels of provision with levels of performance and participation, Jamaica ranked number one and several other Caribbean countries ranked in the top 20 of the 89 developing countries that were included in the assessment. It would seem that the existing organisation of primary schooling, levels of training of teachers, use of traditional instructional technology and financial provision cannot be expected to advance the quality of basic education much further.

For Caribbean countries to achieve higher levels and quality of participation and performance, new paradigms of school organisation, better prepared teachers deployed in more creative ways, new technologies applied to instruction and management, and additional resources are needed. This implies fundamental changes in basic education in the sub-region compared to its structure and organisation over the last 160 odd years of its history. Some countries have already embarked upon elements of a new approach. The Bahamas for example has begun to train all new recruits to the teaching profession through a bachelor's degree programme. Jamaica has reformed the primary curriculum so that the first three years are integrated around language and number learning. Separate subjects begin to be introduced in Grade 4. Barbados has begun to use information and communication technology in both management and instruction in all primary schools, public and private. These measures will need to be complemented by the introduction of targets for learning, enhanced community participation, strong and effective accountability mechanisms and more effective distribution of resources among the various levels of education. Additional efforts will also need to be made to improve co-ordination among countries in the region and also to reduce inequalities in the provision of good quality educational services in each country by assigning additional resources to schools and students in the more deprived communities. What will be needed therefore is a comprehensive approach that combines new levels of teacher preparation, with the use of information technology, new approaches to school and curriculum organisation and new paradigms of assessment. Such an approach will of necessity require greater levels of financial support.

While the focus on primary education is important, it should be mentioned that increased emphasis has also been placed in the Caribbean on secondary education which, in countries such as Jamaica, has been the subject of an extensive programme of educational reform supported by the World Bank and other external donors. Moreover, in recent years governments in the region have begun to focus on early childhood education in recognition of its role in providing the foundation for future educational development. In addition, the Caribbean still lags behind some Latin American countries in terms of enrolment at the tertiary level. Consequently, given these realities, the targets for MDGs in the education sector in the Caribbean should be based on stipulated enrolment levels for primary, secondary and tertiary education.

BOX

1. Note on Measurement

With the exception of Haiti, the challenge posed by MDG 2 to the Caribbean is largely technical. It is one of measurement. The EFA Assessment 2000 exercise for the Caribbean revealed two fundamental weaknesses in the collection and computation of data relative to the various indicators that were employed in that assessment.

First while Ministries of Education which without exception collected annual data on various aspects of education, these data were not compiled and made available on a timely basis. As a result, it was agreed that the most recent year for which data were available would be used on the understanding that when the 2000 or 2001 data became available, the EFA indicators that required population data in their computation would be recalculated.

Second, while Ministries of Education had made various attempts to develop standards for primary education during the 1990s, very few of them were completed by 2000. Subsequently, the Caribbean Centre for Teacher Training (CETT) adopting the framework recommended by Miller (2002) for developing common standards and working with the Ministries of Education in the region, drafted Common Standards for Reading at the Primary Level for Grades 1-3. These are to be presented by the Caricom Secretariat to the Council for Human and Social Development (COHSOD) for adoption.

The adoption of Common Standards for primary Education in the English-speaking countries of the Caribbean Community has the advantage that it will enable stakeholders and actors in primary education to know the target set for achievement at each grade level of the primary system and also enable assessment and evaluative processes to be more easily and effectively synchronised with the instructional processes.

Gender Equality and Women's Empowerment

Introduction

The targets of the third Millennium Development Goals (MDG) are set out in the box below:

GOALS	TARGETS	INDICATORS
Goal 3. Promote Gender equality and empower women	*Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005 and in all levels of education no later than 2015*	∉ Ratio of girls to boys in primary, secondary, and tertiary education ∉ Ratio of literate females to males among 15- to 24-year-olds ∉ Share of women in wage employment in the nonagricultural sector ∉ Proportion of seats held by women in national parliament

The inclusion of a specific *Millennium Development Goal* (MDG) on gender equality and women's empowerment, derived from articles related to the outcomes from a number of international conferences sponsored by the UN during the decade of the 1990s, is a recognition that, in spite of the focus on improving the situation of women worldwide, progress at best had been uneven and that:

> *In many developing countries women and girls are still the poorest, least educated, most unhealthy, and most marginalized segments of the population*. (p.1)[9]

The target identified in relation to the goal of 'gender equality and women's empowerment' is the elimination of 'gender disparity in primary, secondary education preferably by 2005 and in all levels of education no later than 2015'. Indicators for assessment of the attainment of this target are set out in Annex I.

Gender equality is generally defined by quantitative measures and therefore in terms of women having the same opportunities as men for education, employment, etc. The 1995 United Nations Human Development Report[10] identifies two dimensions of gender equality: the development of women's capabilities through access to education and health measured by the Gender-Related Development Index (GDI) and opportunities for economic and political participation as measured by the Gender Empowerment Index (GEM). Grown *et al* (2003)[11] expand this definition to include a third domain: agency or the ability to influence and contribute to outcomes. These authors contend that the third domain is the defining element of the concept of empowerment and only results from an equalising in the power between women and men in the household and societal institutions.

The four selected indicators represent the three domains of gender equality: the ratio of boys to girls in education and the ratio of literate females to males among 15 - 24 year olds are indicators of capabilities; the share of women in wage employment in the non-agricultural sector is an indicator of opportunity; and, the proportion of women in national parliaments is an indicator of agency.

Indicator 1: Male/Female ratio in primary, secondary and tertiary education

Two fundamental problems were encountered in efforts to assess attainment of the education indicators in the Caribbean: the first was the unavailability, in most instances, of enrolment ratios with reference to the relevant age cohort in the general population; and, secondly, the unavailability of data, particularly sex-disaggregated data, in a number of instances. These deficiencies point to the need for a policy position as well as consensus throughout the region on system structure, common definitions for key indicators and, at a minimum, mandatory collection of sex-disaggregated data on an annual basis.

In terms of enrolment at the primary level, complete data sets on net enrolment rates could be located for only four countries: Barbados, Belize, Jamaica and St. Kitts and Nevis. In all cases, except for Belize, enrolment rates at this level favoured boys. At the secondary level complete data were available for only the first three of these four countries and, except for Barbados, the rates favoured females (See Table 1). The shift to female advantage in terms of enrolment at the secondary level is consistent with the trend of higher female participation at the upper secondary and tertiary levels in Caribbean education systems.

Table 1: Net Enrolment Ratios at the Primary & Secondary Levels for Selected Countries

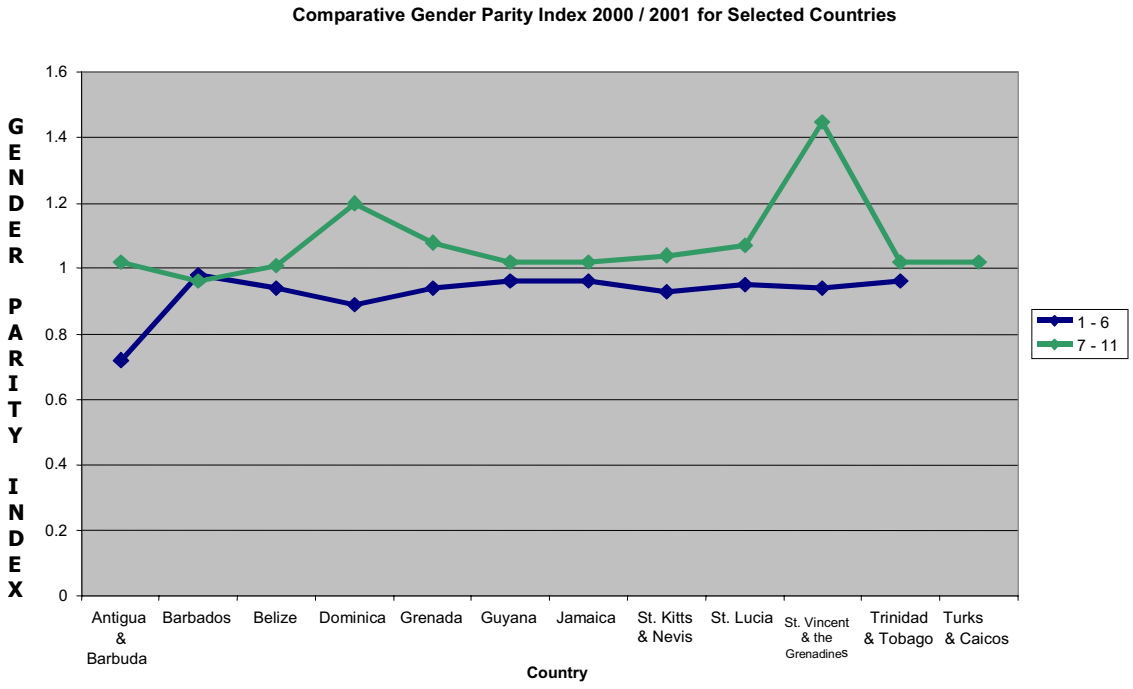
Country	Primary Level	Secondary Level
Barbados (00/01)	Male 78.8 Female 77.8 Total 78.3	Male 99.6 Female 95.1 Total 97.3
Belize (00/01)	Male 86.1 Female 87.7 Total 86.9	Male 72.8 Female 75.6 Total 74.3
Jamaica (00/01)	Male 94.9 Female 90.7 Total 92.8	Male 62.7 Female 63.1 Total 63.2
St. Kitts & Nevis (00/01)	Male 94.9 Female 90.7 Total 92.8	Male n/a Female n/a Total 98.1
St. Lucia	Male n/a Female n/a Total 98.0	Male n/a Female n/a Total 65.9
St. Vincent & Grenadines	Male n/a Female n/a Total 84.0	Male n/a Female n/a Total n/a

Sex-disaggregated data on actual enrolment at the primary and secondary levels were available for eleven countries and were used to calculate Gender Parity Indices (GPIs) for each grade level. The GPI is the ratio of female-to-male value and a GPI of 1 indicates parity between the sexes. A GPI that varies between 0 and 1 means a disparity in favour of boys; a GPI greater than 1 indicates a disparity in favour of girls.[12] The pattern of results for these countries was more or less consistent with that of net enrolment rates with GPIs favouring males at primary level and mostly favouring females at the secondary level, with the exception of Barbados, Guyana, Jamaica and St Vincent and the Grenadines (See Table 2 and Figure 1).

Table 2: Gender Parity Indices for Enrolment at Grades 1 – 6 and 7 - 11 for selected countries

Country	Year	Grades 1 - 6	Grades 7 - 11
Antigua and Barbuda	99/00	0.92	1.02
Barbados	00/01	0.98	0.96
Belize	00/01	0.94	1.01
Dominica	00/01	0.89	1.20
Grenada	00/01	0.94	1.08
Guyana	99/00	0.96	0.96
Jamaica	00/01	0.96	0.98
St Kits/Nevis	00/01	0.93	1.04
St Lucia	00/01	0.95	1.09
St Vincent & Gren	00/01	0.94	0.90
Trinidad& Tobago	00/01	0.96	1.02

Figure 1



Enrolment data for the tertiary level were difficult to determine because of variations in what constitutes education at this level and were only aggregated across different types of institutions in a few cases. Sex-disaggregated data are supplied for some Eastern Caribbean countries in the OECS Human Development Report[13] (See Table 3)

Table 3: Tertiary Enrolment in Select Eastern Caribbean States, 2000

Country	Male	Female	GPI
Dominica	40.0	60.0	1.50
Grenada	44.1	55.9	1.27
St. Lucia	16.6	83.4	5.02
St. Vincent	38.5	61.5	1.60

Source: OECS Human Development Report 2002.

Enrolment at the University of the West Indies typifies the pattern of male/female participation in tertiary education in the Caribbean region. In 2000/2001, overall there was a 2:1 female to male ratio with higher female enrolment on all three campuses. The GPIs therefore favoured females in all instances and ranged from a high of 2.32 at the Mona campus to 1.42 at the St. Augustine campus (See Table 4). The reduced gender gap at the latter campus is attributable to the high male enrolment in science-related fields of study, particularly in the Engineering faculty.

Table 4: Total University Enrollment by Campus and Sex, 2000/2001

Campus	Male	Female	Total	GPI
Cave Hill	1334 (33.8%)	2604 (66.2%)	3938	1.95
Mona	2668 (30.1%)	6186 (69.9%)	8854	2.32
St. Augustine	2893 (41.4%)	4102 (58.6%)	6995	1.42
Total	6895 (34.8%)	12892 (65.2%)	19787	1.87
Outreach	1083 (26.2%)	3058 (73.8%)	4141	2.82
Grand Total	7978 (33.3%)	15950 (66.6%)	23928	2.01

Source: Office of Planning, Vice Chancellery. University of the West Indies, Mona.

Indicator 2: Ratio of literate females to males among 15 to 24 year-olds

Given the higher rates of female participation at the secondary and tertiary levels of education, it is not surprising that ratios for literate females to males supplied by the World Bank for five Caribbean countries generally favoured females. In one case, females were on par with males (Guyana) and in another (Trinidad and Tobago) the reported ratio reflected male advantage (See Table 5).

Table 5: Ratio of Young Literate Females to Males, % ages 15 -24, 2000

Country	Ratio of literate females to males, % 15-24
Bahamas	102
Belize	101
Guyana	100
Jamaica	107
Trinidad & Tobago	99

Source: World Development Indicators Database, World Bank, April 2002

Data on estimates of literacy rates based on completion of at least seven years of primary schooling of the adult population aged 15 years or more for Eastern Caribbean countries, generally mirror the pattern for the countries reported in Table 6. Only in two instances (Antigua and Barbuda and St Kitts and Nevis) were the reported male rate higher than that for females (See Table 6).

Table 6: Adult Literacy rates – OECS Countries

Country	Male	Female	Total
Antigua & Barbuda (1991)	87.4	85.9	84.4
Dominica (1995)	n/a	n/a	96.4
Grenada (1991)	93.7	95.1	94.4
Montserrat (1996)	91.1	95.7	94.2
St. Kitts & Nevis (1991)	98.2	97.4	97.8
St. Lucia (1991)	n/a	n/a	90.2
St. Vincent & Grenadines	88.2	89.5	88.8

Source: OECS Human Development Report 2002

Indicator 3: Share of women in wage employment in the non-agricultural sector

According to UNIFEM,[14] persons who work in agriculture are more likely to be self-employed or engaged in unpaid family work while paid employment is more prevalent in industry and services. Women's share of paid employment in these sectors is therefore an indicator of how far the obstacles to women holding paying jobs have been dismantled and the extent to which women have equal access to jobs in areas of expanding employment.

Data from the World Bank Development Indicators Database reveal that in Caribbean countries for which data were available, there was parity in share of employment in the non-agricultural sector only in St. Lucia. In all other cases males had the larger share of employment with the gap being widest in Suriname, Guyana and Trinidad and Tobago (See Table 7).

Table 7: Share of female employment in non-agricultural sector

Country	% of total
Antigua & Barbuda (1990)	47
The Bahamas (2000)	49
Barbados (2000)	47
Belize (2000)	40
Grenada (2000)	44
Guyana (1990)	36
Haiti	na
Jamaica (2000)	48
St. Kitts & Nevis (1990)	47
St. Lucia (2000)	50
Suriname (2000)	34
Trinidad & Tobago (2000)	38
St. Vincent and the Grenadines	na

Indicator 4: Proportion of seats held by women in national parliaments

Women's involvement in representational politics and the number of seats held by women in national parliaments are regarded as an indicator of progress towards empowerment. According to the UNIFEM 2000 Report on *Progress of the World's Women*

> *greater equality in the numbers of women holding political office is important not only in its own right but also because it may give women more of a voice in determining the laws and policies which regulate women's progress in other areas of life such as the economy.* (p.76)

Table 8: Women in Political Decision-making in Selected Caribbean Countries, 1998

Country	Lower House of Representatives	Upper House/ Senate	Cabinet
Antigua & Barbuda	1/19 (5.3%)	3/17 (17.6%)	0/10
Bahamas	6/40 (15.0%)	5/16 (31.2%)	3/13 (23.0%)
Barbados	3/28 (11.0%)	7/21 (33.0%)	3/13 (23.0%)
Belize	2/29 (6.8%)	4/9 (44.4%)	1/16 (6.3%)
Jamaica	8/60 (13.0%)	5/21 (24.0%)	2/17 (11.8%)
St. Lucia	2/17 (12.0%)	2/11 (18.0%)	2/16 (12.5%)
Trinidad & Tobago	4/36 (11.1%)	11/31 (35.4%)	2/22 (9.1%)

Source: Vassell, L. 1998. Gender and Politics in the Commonwealth Caribbean.

Figures supplied by Vassell (1998),[15] for female participation in political decision-making at the national level show that in the 7 countries that were selected, female representation was highest in the Upper House or Senate but in the Lower House or Parliament and in Cabinet representation it was well below the 30% minimum target proposed by Commonwealth Ministers Responsible for Women Affairs at their 1996 meeting in Trinidad and Tobago.[16]

Utility of the indicators in relation to the Caribbean reality

It is instructive to note that the target statement speaks only to capabilities as reflected in educational attainment and not to issues of opportunity and agency. A basic underlying assumption embedded in the target statement, which is also highlighted in many of the outcome documents of the international conferences held to assess the situation of women in the 1990s, is that education can be used as the vehicle for women's economic and political empowerment.

At the 1985 *Third World Conference on Women*[17] education was promoted as the basis for the full promotion and improvement of the status of women and as the basic tool that should be given to women to fulfil their role as full members of society. The 1990 *World Conference on Education for All*[18] called on Governments to remove cultural barriers to women's education and to make education productive and employment oriented. Five years later this call was reiterated in the *Platform for Action*[19] which emerged from the Fourth World Conference on Women in which it was suggested that equality of access and educational qualifications were needed to allow more women to become agents of change as well as empowering them to participate in decision-making in society. UNESCO goes a step further and claims that education equips women 'to advance their rights and fend off multiple forms of discrimination[20].

The Caribbean, however, presents a unique situation in relation to the correlation between women's educational attainment and gender equality and women's empowerment. Bailey (2003) posits that

> *….education has not proven to be the vehicle for Caribbean women's economic, political or personal empowerment. In spite of their overall higher levels of participation and performance at the secondary and tertiary levels of Caribbean education systems, the majority of the women in the region continue to be positioned in the lowest sectors of the capital market, earn lower wages than men, suffer higher rates of unemployment, experience greater levels of poverty, are under-represented in decision-making positions at the meso and macro levels of social and political institutions and lack real personal autonomy*. (p.136)[21]

Data presented in relation to each of the indicators related to MDG3 substantiate this claim and raise questions as to the utility of these indicators as a measure of the Caribbean reality.

Several criticisms have been levelled against these indicators. Grown *et al* (2003) contend that the ratio of boys to girls in school only reflects the input side of education but the more important issue, they claim, is completion and student learning outcomes. However, even this would not adequately capture the idiosyncrasies of the Caribbean situation. Drop-out rates and enrolment ratios at the primary and secondary level indicate that girls have much higher participation and completion rates than do boys and performance data reflect higher attainment of learning outcomes for girls. In spite of this, however, higher rates of performance and attainment do not translate into better positioning of women in labour markets and their increased involvement in decision-making in Caribbean societies.

Bailey (2003)[22] contends that the focus on the quantitative gains Caribbean women have made in education only serves to mask the fact that, when viewed from a qualitative perspective, because of where females are positioned in the school's curriculum, beyond school they actually have less of a competitive advantage than their male counterparts. This begs the question of the extent to which women's education develops capabilities which give them a competitive advantage beyond school and equips them with the competencies required to take advantage of employment opportunities and participate as full citizens in their various contexts.

The focus on the share of women in the non-agricultural sector may have some usefulness in terms of reflecting general trends but is unresponsive to issues that impact on female labour force participation including occupational sex-segregation, wage differentials, decent work provisions, unemployment and work in the largely unregulated informal sector. Bailey & Ricketts (2003)[23] note that in spite of the generally higher level of educational attainment recorded by females across the region and the improved quality of women's employment manifested in the numbers employed as professionals, senior officials and managers, there is continued cause for concern regarding their substantially lower labour force participation rates, simultaneous high-level employment in low end elementary occupations and persistent concentration in traditionally "female" occupational groups.

In Jamaica, as in other Caribbean countries, 2001 Labour Force statistics[24] indicate that 68.23% of the female employed labour force were clustered in the 'Clerks' (16.41%), 'Service Workers, Shop and Market Sales' (25.25%) and 'Elementary Occupations' (21.57%) categories of the market; occupations which, for the most part, attract a minimum wage. On the other hand, although the number of women classified as 'Professionals, Senior Officials and Technicians', the highest occupational group, has been steadily increasing and in 2001 represented 21.64% of all employed women, this grouping includes teachers and nurses, occupations which although not lower-skilled are under-valued in terms of social status and, therefore, are accorded low levels of remuneration compared with other professions in this grouping. Data also indicate that within this category there is status stratification with women over-represented in the lower strata and markedly absent from decision-making positions (Ricketts & Benfield 2000).[25]

The ECLAC/CDCC report further points to the correlation between sex-segregation of the curriculum and occupational sex-segregation:

> *"[a] closer examination of the patterns of female achievement within the education system suggests strongly that the pattern of segregation evident in subject selection has had the effect of maintaining the unequal and inequitable division of labour in the home and in the workplace"* (p5).

The consequences for female employment and participation in the labour force, particularly those who are poor and economically vulnerable, are therefore quite negative. It is argued that if women's position at the lower end of the market is to be reversed, the distinction between educational attainment levels *per se* and the subjects in which women gain qualifications will become increasingly important in the future (United Nations Research Institute for Social Development, 2000)[26]. In the same paper it is postulated that scientific, technical and managerial qualifications will assume increased importance in giving women access to high-level jobs in the future.

In terms of the utilisation of the proportion of seats in national parliaments as an indicator of agency, Grown et al (2003)[27] are of the opinion that it is an imperfect proxy for tracking levels of female empowerment. They posit that as an indicator it says nothing about whether women have power to make decisions or whether or not such women are sensitive to gender issues and can promote a gender equality legislative agenda. They note that it might be more useful to track progress that women make at the local level because it is at the municipal and local level rather than in national elections that women have been making inroads.

The indicators identified in relation to Goal 3 for measuring progress towards gender equality and women's empowerment represent all three domains but, as Grown, Gupta and Khan (2003)[28] point out, progress in any one domain to the exclusion of others is insufficient to meet the goal of gender equality. They point to the fact that, as is the case in the Caribbean

> *(E)ven though education provides women with an essential capability and has intrinsic value, gender equality and the empowerment of women can remain elusive goals without the opportunity to fully use that capability, for example, in employment, or by participating in decision making in the political arena. (*p. 7)

Conclusion

In the UNIFEM biennial Report on the Progress of the World's Women 2000 it is noted that the process of evaluating how far commitments to the progress of women have been made requires gender sensitive indicators. In 1999 the UN agencies selected a set of 40 indicators to guide the preparation of the UN Development Assistance Framework (UNDAF) in countries in which UN development co-operation takes place. Included in these are indicators of gender equality and women's empowerment. Three of the four indicators related to MDGs are identical to those listed in the UNDAF.

The UNIFEM Report,[29] however, cautions that these UNDAF indicators of gender equality and women's empowerment are best understood

> *….as measures of the extent to which there is an enabling environment in which obstacles to women's exercising agency are diminishing. They do not measure the subjective dimensions of women's empowerment, the extent to which women feel themselves able to speak out and take control of their lives*. (p.10)

There is therefore an admission that these indicators are not the most suitable for determining actual progress towards gender equality and women's empowerment. Caribbean stakeholders with an interest in MDG3 therefore need to take serious note of the conclusion emanating from the Regional Consultation on the MDGs and Sustainable Development held in Barbados in July 2003[30] which states:

> *It is possible to critique the goals, targets and indicators on many grounds and hence the necessity to customise and contextualize them to make them more relevant to the level of achievement and the aspirations of the Caribbean. ……the framework can be enhanced by the addition of more qualitative and relevant quantitative measures.*

Grown *et al* (2003)[31] suggest that the identified indicators have limitations and suggest the following supplementary indicators in relation to each of the equality domains:

- Completion rates in addition to enrolment rates for all levels of education;
- Gender gaps in earnings in paid and self-employment, sex-disaggregated unemployment rates and occupational segregation; and,
- Prevalence of domestic violence in addition to share of seats in national parliaments. (p. 11)

As indicated earlier, however, selection of indicators which would be responsive to the Caribbean reality requires a radical shift away from the narrow focus on quantitative sex differentials in the three domains to a much greater concern with the qualitative dimensions of the gendered experiences of both sexes in these equality domains and therefore with issues of equity and empowerment. Consequently, whereas, as suggested in the previous section, the additional indicators proposed by Grown *et al* in the second and third groupings would be of particular relevance to the Caribbean, as discussed earlier completion rates would not be illuminative in relation to the gendered nature of Caribbean education systems. What is required in this regard is an analysis of the curriculum positioning of the sexes and therefore an analysis of sex differences in the capabilities developed through schooling. This however

needs to be analysed in relation to the socio-economic and political value of these capabilities and the extent to which they facilitate equal access to opportunities and the exercise of citizenship.

Gender inequality is multi-dimensional and multi-sectoral. Grown et al (2003) therefore posit that gender is highly relevant to all the MDGs but that targets to measure progress to reduce gender inequalities in each of the other MDGs are glaringly absent. The inclusion of a broader set of indicators in respect of MDG3 would not only facilitate a more responsive assessment of progress towards MDG3 but their inclusion would also create an interface between MDG3 and other MDGs, all of which have definite gender dimensions for which indicators are yet to be identified.

Reduction of Child Mortality

Introduction:

The targets of the fourth Millennium Development Goals (MDG) are set out in the box below:

GOALS	TARGETS	INDICATORS
Goal 4. Reduce child mortality	*Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate*	∉ Under-five mortality rate ∉ Infant mortality rate ∉ Proportion of one-year-old children immunized against measles

In 1990, the World Summit for Children adopted a list of goals to be achieved by the year 2000. Principal among the goals was a reduction in deaths of children under five years by one-third or below 70 per 1,000 live births. Only 5 of 55 countries with under five mortality rates above 100 achieved this goal (UNICEF). The Millennium Development Goals (MDGs) adopted in 2000, identify as goal number four, the reduction of child mortality, with the target being a reduction of the under five mortality rate by two- thirds between 1990 and 2015.

Three indicators are recommended to monitor this goal, two outcome indicators (the under five mortality rate and infant mortality rate) and one indicator of access to resources (the proportion of children under one year immunised against measles).

The under-five mortality rate (U5MR) is the probability of a child dying between birth and five years, expressed per 1,000 live births. The infant mortality rate (IMR) is the probability of a child dying prior to the first birthday, expressed per 1,000 live births. Both the under five and infant mortality rates are the result of a number of inter-related factors, including the nutrition, education and health knowledge of mothers; the availability of maternal and child health services; income and food availability, access to clean water, sanitation and child safety. The IMR is greatly influenced by deaths in the first month of life, with up to a half of infant deaths occurring during this period. The U5MR is less affected by infant deaths and less subject to the fallacy of the average, preventing a wealthy minority from significantly affecting a nation's U5MR (UNICEF). The U5MR is the principal indicator used by the United Nations to monitor child well-being.

This section of the report reviews the status of the Millennium Development Goal related to child mortality for the Caribbean Region over the 10 year period, 1990-2000.

Status of Achievement:

Methodology

Data were available from three main sources: PAHO (Basic Indicators 2002), UNICEF (End Decade Databases, State of the World's Children) and Country Surveys. There are challenges in interpreting mortality data for the Caribbean region. Data on child mortality are usually calculated from registration records and population census information. Significant under-reporting of infant deaths to government registration bodies leading to underestimated mortality rates has been documented in at least one Caribbean country in which this has been studied (McCaw-Binns 1996). Surveys using national population samples are conducted periodically rather than annually in the Caribbean, and are not conducted by all Caribbean countries in the same year. Estimates of mortality rates, using curve-fitting methodology from the most recent registration and/or survey data, are frequently employed to overcome this problem (Hill et al).

As a result of the above, wide variations in mortality rates may occur. For example, PAHO's Basic Indicators 2002 reports the IMR for Belize in 2000 as 22 per 1,000 live births while UNICEF's State of the World's Children 2003 reports it as 54 per 1,000, a greater than 200 percent increase. However, it is felt that given the level of under-reporting, the latter figure is probably closer to the reality.

For this report, a single data source, UNICEF, was used for analysis of mortality, because of completeness of data for Caribbean countries and availability of comparative data over the ten-year study period. The use of a single data source also presumes that the method of data collection and therefore the degree of error are consistent over the time period reported

Country data on measles immunisation rates are usually obtained from surveillance at primary health care centres or from periodic cluster surveys. UNICEF data was also used for this analysis.

Under-Five Mortality Rate:

The U5MR has been classified by UNICEF as very high when it is over 140, high between 71 and 140, middle between 21 and 70 and low when 20 or less. In 2001, no Caribbean country or territory fell within the very high category and only Haiti and Guyana fell within the high category (Table 1). Within the middle range, there were five countries: Belize, Grenada, St. Kitts and Nevis, St. Vincent and the Grenadines and Suriname. The majority of countries, seven in total, fell within the low category.

The four countries with the highest U5MR, all with rates above 30 per 1,000 live births are easily identified as among those Caribbean countries that have large land masses and dense forested areas. With the exception of Suriname, these countries also have relatively low rates of urbanisation. This suggests that access to health care may be an important factor associated with high U5MR in the region. Indeed the Guyana country report notes the challenges involved in providing health care for persons in remote districts, deep rural and riverain areas.

Figure 1 shows the trend in the U5MR and IMR over time. Caribbean countries have generally shown a decline in mortality rates over the last 10 years, with significant variability in the degree of reduction (Table 1). Countries with the highest U5MR in the 1990's would have the greatest potential for reduction.

To achieve a decrease in U5MR by two-thirds in 2015, a minimum reduction of 27 percent between 1990 and 2000 is necessary, recognising that more rapid decreases are expected when rates are higher. Only five of fourteen countries/territories have achieved this goal: Suriname, Grenada, St. Kitts and Nevis, the Bahamas and Dominica. . Extrapolating from this trend, these countries are therefore likely to achieve the target in 2015. No data were available from Montserrat where there has been significant loss of available land, disruption to infrastructure and population changes within the last few years as a result of the eruption of the Soufriere volcano

Infant Mortality Rate

Figure 1 shows that over the last 10 years, the IMR has fallen in most Caribbean countries in a manner similar to the U5MR. Also, similar to the U5MR, the greatest absolute reductions occurred in countries with the highest IMR, which have the greatest potential for reduction.

Table 1 shows that countries with high U5MRs were also those with high IMRs This is not surprising as infant mortality is a significant contributor to under-five Mortality. During the infancy period of the first year of life, the majority of deaths occur in the neonatal period, or the first 28 days of life. Of 11 million under- five deaths worldwide, 4 million (36 percent) occur in the first 28 days. However, the proportion of deaths occurring in the neonatal period varies with the overall rate of child mortality. In populations with U5MRs greater than or equal to 35, 20 percent of all deaths occur in the neonatal period, but in populations where the U5MR is less than 35, more than 50 percent of child deaths occur in the neonatal period

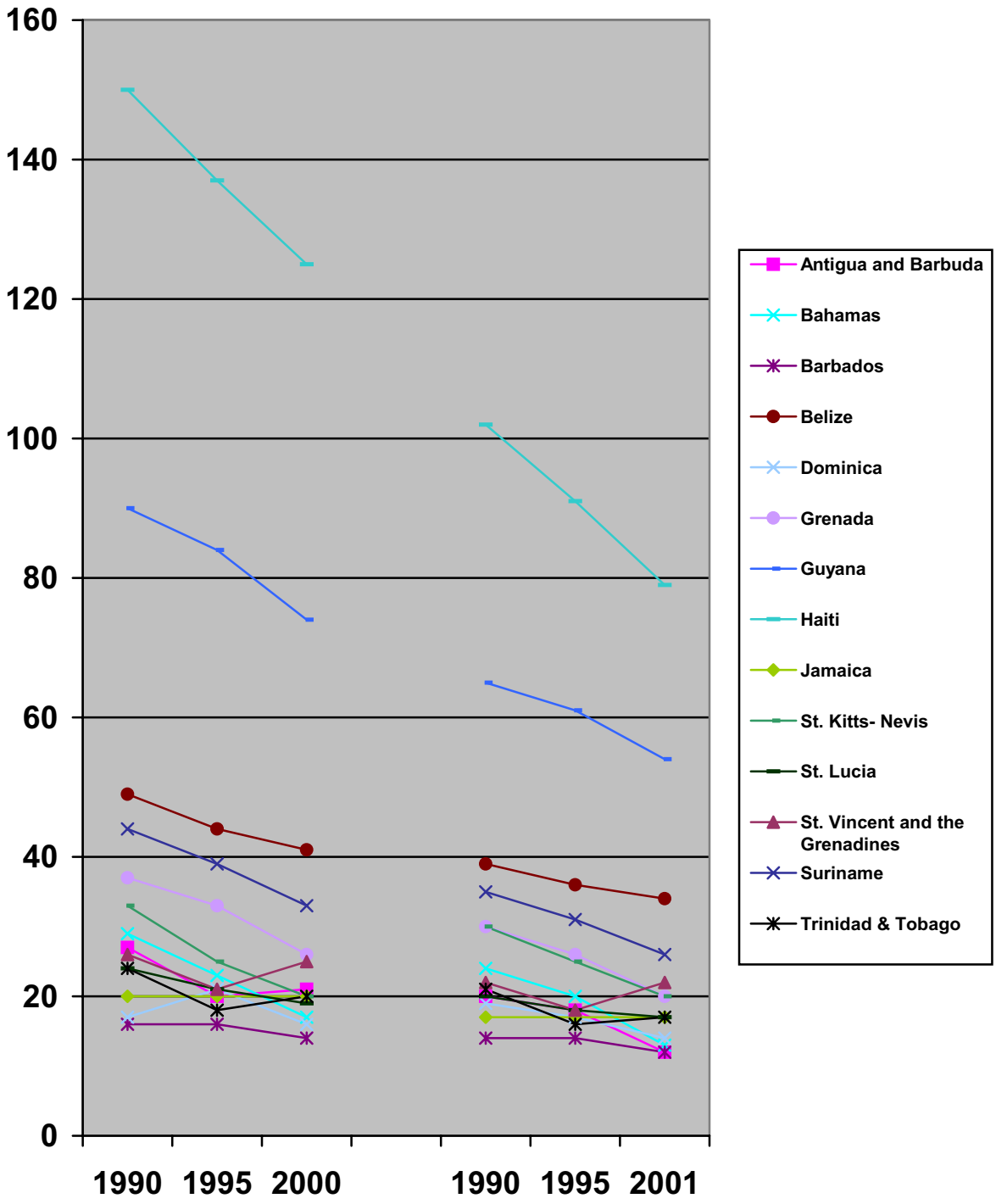
Table 1.

Selected Demographic Indicators, Under Five and Infant Mortality Rates for Caribbean Countries+

Country	Population	% Urban	U5MR (2001)	% Reduction since 1990	IMR (2001)	% Reduction since 1990
Antigua/ Barbuda	66,970	37.4	14	-	12	40
Bahamas	303,611	89.1	16	45	13	46
Barbados	275,311	51.1	14	13	12	14
Belize	256,062	48.3	40	18	34	13
Dominica	70,786	71.7	15	35	14	26
Grenada	100,703	39.0	25	32	20	33
Guyana	743,000	37.2	72	20	54	17
Haiti	6,964,549	37.0	123	18	79	23
Jamaica	2,665,636	57.1	20	0	17	0
Montserrat	8437	na	na	na	7.77	na
Suriname	417,000	75.3	32	27	26	26
St. Kitts / Nevis	38,756	34.5	24	33	20	33
St. Lucia	153,189	38.3	19	21	17	15
St. Vincent/Grenadines	111,638	57.0	25	4	22	0
Trinidad & Tobago	1,274,799	74.9	20	17	17	19

Fig 1.

Under 5 and Infant Mortality Rates for Selected Caribbean Countries 1990-2000

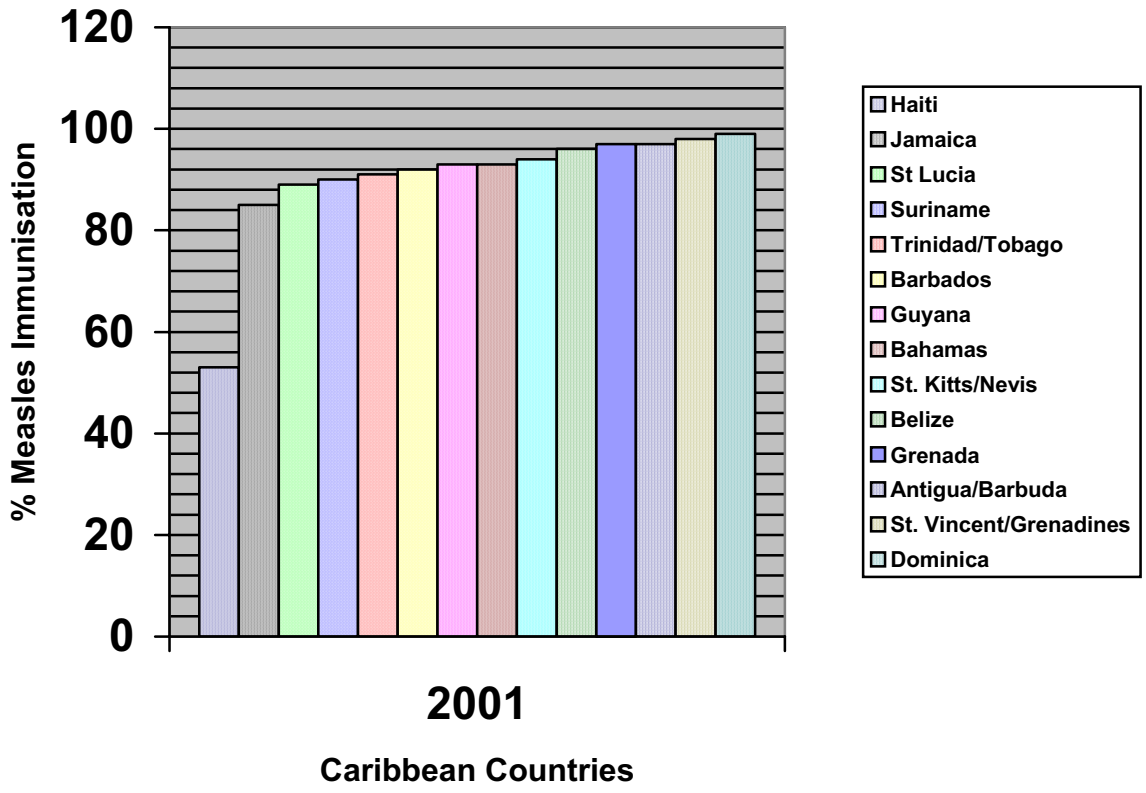


Measles Immunisation:

For countries to have adequate immunisation coverage, 90 percent immunisation rates of children under one year are recommended. Fig. 2 shows that of fourteen Caribbean countries, only three had measles immunisation rates below 90 percent: Haiti, Jamaica and St. Lucia. Of those countries with rates less than 90 percent, two are well on the way with measles immunisation rates at 85 percent and 89 percent. Haiti, with a very low measles immunisation rate of 53 percent, was also the country with the highest U5MR and IMR

Figure 2.

Measles Immunisation Coverage in children under one year (%)



Causes of Death in Caribbean Children under five years of age:

In order to reduce death in Caribbean children, it is necessary to identify the important causes of death. Information on the causes of death of Caribbean children was obtained from data produced by the Caribbean Epidemiology Centre (CAREC). The data were divided into the 1-4 year old category (under-five deaths minus deaths in the first year of life) and infant deaths (deaths in the first year of life) and showed trends in the cause of death between 1980 and 1995.

In the 1-4 year old category, eight major causes of death were identified: acute respiratory infection (e.g. pneumonia), intestinal infectious diseases (e.g. diarrhoeal diseases), nutritional problems and anaemias (e.g. malnutrition, iron deficiency anaemia), congenital anomalies (abnormalities of organs of the body present since birth), motor vehicle injuries, fires, other intestinal and parasitic infections (e.g. worms, malaria) and AIDS.

A significant reduction had occurred in all causes of deaths in the 1-4 group, with the exception of AIDS, for which no data were available for 1980. The greatest gains were in deaths from acute respiratory infection and intestinal infectious diseases, both of which had death rates greater than 30 per 100,000 in 1980 and 5 per 100,000 or less in 1995. Despite gains, these two conditions continued to be responsible for the largest number of deaths in 1995, followed by congenital anomalies. As infectious causes of death (from

both respiratory and intestinal conditions) decline, congenital abnormalities become proportionately more important. The significant contribution of AIDS, the fourth commonest cause of death, with a death rate of 3 per 100,000 in 1995, was also apparent.

In the infant death category, there were ten major causes of death: intestinal infectious diseases (diarrhoeal diseases), slow foetal growth (babies born weighing less than expected), acute respiratory infection (e.g. pneumonia), hypoxia (lack of oxygen), congenital anomalies (abnormalities of organs of the body present since birth), other perinatal conditions (conditions occurring at or around the time of birth of the infant, such as newborn infections), nutritional conditions and anaemias (malnutrition, iron deficiency anaemia), AIDS, homicides (murder) and undetermined injury.

Similar to the 1-4 category, the greatest gains were made in respect of intestinal infectious diseases and acute respiratory infection, with death rates declining from 3 - 4 per 1,000 live births in 1980 to less than 0.5 per 1,000 live births in 1995. The four commonest causes of death were those most likely to occur in the first 28 days of life (i.e. the neonatal period), namely, hypoxia, slow foetal growth, congenital anomalies and other perinatal conditions. Hypoxia, the commonest cause of death, was the only category to show an increase in deaths from 3 per 1,000 live births in 1980 to just over 4 per 1,000 in 1995. The importance of hypoxia as a cause of death is consistent with a detailed evaluation of deaths within the first 28 days of life in Jamaica in 1986, where three-quarters of deaths were equally distributed between perinatal asphyxia (hypoxia at or around the time of birth) and conditions associated with premature birth (Samms-Vaughan, 1990). Slow foetal growth, the second commonest cause of death, showed only modest reductions from greater than 4 per 1,000 live births in 1980 to 3 per 1,000 live births in 1995.

AIDS, homicides and undetermined injuries appeared as significant contributors to death in 1995, with death rates of 0.5 or less per 1,000 live births. This reflects the impact of AIDS and violence as new challenges to the survival of Caribbean children. Projections to the year 2015 suggest that there will be little change in the main causes of death. The most significant factor anticipated in the next 15 years is an increase in infant deaths from HIV/AIDS.

Evidence based interventions to reduce death in children under 5 years:

A detailed analysis of proven preventive and therapeutic interventions for the most common causes of child mortality worldwide has recently been published (Jones, 2003). Attention to the relatively small list of proven interventions identified could potentially prevent 63 percent of the 11 million under five deaths worldwide. Among the nine common causes of under-five deaths worldwide, measles and neonatal tetanus are not conditions of high importance to the Caribbean region. Malaria, present in only a few Caribbean countries such as Haiti, Guyana and Suriname, is not an important cause of death in the Caribbean region as a whole, but is of importance to specific countries. The six conditions of importance to the Caribbean region are acute respiratory infections, intestinal infections, AIDS, birth asphyxia (lack of oxygen at birth), pre-term delivery and neonatal infection.

Preventive interventions for intestinal infections (diarrhoea) and acute respiratory infections (pneumonia) include breast feeding, complementary feeding and zinc supplementation. In addition, improved access to potable water, sanitation and hygiene and use of Vitamin A supplementation reduces diarrhoeal mortality and the use of the Haemophilus Influenza (HIB) vaccine reduces mortality from pneumonia. Vitamin A and zinc supplementation may be relevant to only a few Caribbean countries where malnutrition remains a concern and increases the likelihood of mortality.

Therapeutic interventions that reduce mortality from intestinal infections include use of Oral Rehydration Therapy, antibiotics for dysentery and zinc supplementation. Antibiotic use reduces mortality from respiratory infection. HIV/AIDS deaths can be prevented by the combination of anti-microbial therapy, such as Nevirapine, and replacement feeding.

Fewer interventions have been proven effective for the common conditions arising in the first twenty-eight days of life: birth asphyxia (hypoxia or lack of oxygen at birth), pre-term delivery and neonatal infection (infection within the first 28 days of life). Only effective newborn resuscitation has been proven to reduce death from asphyxia. Breast-feeding, delivery in a clean environment and antibiotic treatment for premature rupture of membranes are proven preventive methods to reduce death from neonatal infection and antibiotic treatment is the only proven therapeutic intervention.

Only preventive interventions are possible for reducing deaths from pre-term delivery: use of steroids in the antenatal period, maintaining the temperature of newborn babies, and antibiotics for premature rupture of membranes.

Recommendations for Ensuring Progress Towards the Millennium Development Goals:

1. Accurate data is necessary for health planning. Although available data have been used in this report to determine trends and current status, there is substantial evidence to support data inaccuracy. Wide differences between U5MR and IMR from different data sources support the need for accurate national data systems to determine country priorities. Data collection at the sub-national level has also been deemed important to assess local epidemiological profiles, health system capacity and community preferences (Bryce et al.). Data collection must be continuous or periodical to facilitate regular monitoring and to determine effectiveness.

2. In Caribbean countries with high U5MR and IMR, lack of adequate access to services is a significant contributing factor. The development of a suitable support infrastructure (transportation, permanent health centres, visiting health personnel, local community programmes) that allows persons in rural areas to easily access health care is a prerequisite for reducing mortality rates.

3. The proven interventions to reduce U5MR that are relevant to the Caribbean region are health education of the population (breast-feeding, complementary feeding, knowledge of signs of illness in children), adequate public health systems (water, sanitation, hygiene), education of health personnel and the availability of basic treatments to all persons (use of oral rehydration fluid, antibiotics, antenatal steroids, nevirapine therapy, temperature management and newborn resuscitation). The identified basic health treatments include those used in the primary health care system (oral rehydration fluid and antibiotics) and those in the secondary and tertiary systems (newborn resuscitation, Nevirapine therapy). These interventions can only be realised in the context of an efficiently functioning health system, which is accessible, has adequate manpower and a proper allocation of resources.

4. The emerging impact of injuries and homicide as a result of violence and/or accidents on the mortality of Caribbean children needs to be addressed by the recognition of violence as an important public health issue. Violence monitoring by the health and social services and intervention and prevention programmes targeting communities will need to be developed.

5. Cuba is a country that has been highly successful in achieving health goals, despite also experiencing the economic difficulties common to many Caribbean countries. The mechanisms used to achieve these goals should be studied and replicated, where appropriate, in other Caribbean countries.

Provided these conditions are met, Caribbean countries have the potential to achieve by 2015 the targets stipulated under this goal.

Improving Maternal Health

INTRODUCTION

The targets of the fifth Millennium Development Goals (MDG) are set out in the box below:

GOALS	TARGETS	INDICATORS
Goal 5: Improve maternal health	*Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio*	∉ Maternal mortality ratio ∉ Proportion of births attended by skilled health personnel

Worldwide, over half a million women die each year in the attempt to create new life. In Latin America and the Caribbean, WHO[32] estimates there are 22,000 such deaths annually, 90 percent of which are preventable. Saving women's lives, while intrinsically good, is also critical because of the profound ripple effect of a mother's death on the lives of children, especially female and sick children, who are left to survive without the love, nurture and affection of the person most willing to provide this care.

Maternal health status is intricately tied to women's education and socioeconomic status. Poor, illiterate women are at greatest risk of maternal death because they lack the tools and resources to control their fertility, make decisions about their reproductive health, have restricted access to information and therefore services critical to their survival.

The MDGs include two indicators of maternal health status -- one process variable (access to skilled care at delivery) and one outcome measure (the maternal mortality ratio).

While 85 percent of women will experience a normal, problem-free pregnancy and deliver a full term, live-born healthy infant, the way in which services are organised for the 15 percent of the reproductive cohort who need more than basic midwifery care determines whether maternal and perinatal mortality rates will decline or stagnate at the present levels.

METHODOLOGY FOR MEASURING MATERNAL HEALTH STATUS IN THE CARIBBEAN

Monitoring maternal mortality is a challenge[33] as it is extremely difficult to measure. Maternal deaths are relatively rare events, only exceeding 1 percent (1000 per 100 000) on the African sub-continent. This limits the use of sample survey methodologies. Its relative rarity also makes it a highly unstable measure of pregnancy outcome, especially in countries whose population is less than 300,000 – a situation which describes 6 of the 14 Caricom countries included in this report (See Table 1).

For the eight countries with relatively large populations, case ascertainment is challenged by the problem of misclassification. Deaths often missed in routine reporting include those associated with abortion (especially if abortion on demand is not legal), other deaths in early pregnancy (less than 20 weeks gestation) or where the pregnancy may have been unknown to the woman or her family. Also at risk of misclassification are deaths due to medical complications such as sickle cell disease, pneumonia or cardiovascular disease and deaths that occur days or weeks after delivery as the connection between the complications and the pregnancy may not be recognized or documented. Deaths from these medical complications are coded differently in the pregnant and non-pregnant person, hence the potential for mis-classification. In addition, pregnancy aggravates HIV disease. However, in keeping with current WHO coding rules,[34] these deaths are attributed to HIV, instead of being classified as maternal deaths.

Data Sources

Much of the data used are drawn from multi-lateral agencies, mainly PAHO, WHO and UNICEF. WHO has published two estimates of maternal mortality for the larger countries: one for 1995 and another for 2000. For smaller countries, other sources including national MDG reports are used to fill the information gap. The instability of these estimates for small countries warrants interpretation of the data with caution. Since the risk of maternal death occurs in the context of other reproductive health indicators, others will be presented to facilitate discussion of the issues.

Maternal mortality: process for arriving at 2000 estimates, for populations greater than 250,000

WHO has, over the last 20 years, refined its process of estimating maternal mortality. The 2000 estimate classified countries into six categories. (See Box). For the 1995 review, no Caribbean country was in group A. In 2000, Barbados and Trinidad/Tobago moved from group B to A. For countries in Groups B (Guyana) and F (Bahamas), a statistical model was used to derive the maternal mortality estimates. For those in Group D (Jamaica, Suriname), reported maternal mortality ratios were adopted with no adjustment. For Groups A (Barbados, Trinidad and Tobago) and C (Haiti), observed values were adjusted to compensate for expected under-reporting.

AbouZahr and Wardlaw (2003) report that the 1995 and 2000 estimates cannot be used to analyse trends because of the number of modifications introduced into the approach for developing the 2000 estimates and the wide margins of uncertainty associated with the estimates. These margins of uncertainty derive from several sources:

- For countries with highly developed statistical systems, MMRs are thought to be underestimated by a substantial margin, and have been inflated by 50 per cent. While there is evidence that such an adjustment factor is by no means exaggerated, the true figure could be higher or lower and could change over time.
- For countries with maternal mortality data derived from direct or indirect household surveys, the margins of error derive not only from sampling error but also from recall problems and the need to impute missing data.
- For countries with data derived using RAMOS approaches, the margins of uncertainty result from sampling errors and errors in calculating the numbers of live births.
- For countries with modelled maternal mortality ratios, the margins of uncertainty are the result of prediction errors.

While the 2000 estimates improves on existing data by adjusting for underreporting of deaths and generating model-based estimates for countries with no maternal mortality data, they are still subject to wide margins of error. These estimates are therefore indicative of an order of magnitude of the problem but are not intended to serve as precise estimates. They also cannot be interpreted as indicative of trends compared to earlier estimates for 1990 and 1995.

For monitoring trends, process indicators that track use of professional care during pregnancy and childbirth, particularly for the management of complications, can be used. The most widely available indicator is the proportion of women who deliver with the assistance of a medically-trained health care provider – midwife, doctor, nurse (generally referred to as a skilled attendant) – the other MDG maternal health indicator.

Box:

WHO: Quality of maternal mortality estimates (2000)

Class	Country data source and type	Caribbean countries
A	Complete* vital registration with *good* attribution of cause of death	Barbados Trinidad & Tobago
B	Complete* vital registration with *uncertain or poor* attribution of cause of death	Guyana
C	Estimates based on sisterhood methods	Haiti
D	Estimates based on reproductive age mortality studies	Jamaica, Suriname
E	Estimates based on other survey or census estimates	None
F	No national data on maternal mortality	Bahamas

Source: Hill, AbouZahr, Wardlaw

*Complete" means 90% or more of adult deaths are reported. WHO estimates of quality of cause of death attribution used.

FINDINGS

Fertility

Table 1 shows that in 3 of 14 countries, total fertility rates are below replacement level (TFR=2), implying negative population growth. If this trend continues, labour force shortages may develop unless more liberal intra-region immigration policies are adopted. Where contraceptive prevalence rates are relatively high (>60%) but the TFR exceeds 2, services need to be targeted to those groups whose fertility rates remain high. Some solutions however fall outside the health sector, since reproduction is highly correlated with socioeconomic status and women's education. As the region moves through the demographic transition, total births can be expected to continue to decline.

HIV/AIDS

In the Caribbean the HIV/AIDS epidemic is a generalized one, with most new cases due to heterosexual transmission. All countries therefore need to adopt universal HIV screening of all antenatal women, supported by provision of anti-retroviral therapy (ART) and well designed mother to child transmission prevention programmes. If not, the limited gains in infant and under-five mortality will be reversed by HIV/AIDS and the maternal mortality ratio will climb instead of decline.

HIV and maternal mortality

For the first time since maternal mortality surveillance began in Jamaica (1981-83), the 1998-2003 review documented maternal deaths due to HIV/AIDS. Given the higher reported HIV prevalence in the Bahamas, Guyana, Haiti and Trinidad/Tobago, HIV related maternal deaths can be anticipated in these countries.

MDG reproductive health goals: skilled attendance and maternal mortality

Skilled attendance

Table 2 shows that only four countries in the region report rates of skilled attendance below 95 percent, namely Haiti (24%), Belize (83%), Suriname (85%) and Guyana (86%). A plan to train and deploy these skills is indicated for Haiti as little progress seems to have been made during the past decade. While data comparability over the review period is an issue, it is possible that some deterioration in access to care may have occurred in Suriname and Guyana, with improvement noted for Belize.

Maternal mortality: populations greater than 250,000

In spite of WHO's admonition to not use the 1995 and 2000 reports to monitor trends, some discussion of the two reports are warranted. Of the seven countries, only Jamaica and Suriname did not have their reported rates adjusted. Those two countries together with Haiti were the only ones where ratios were reported as declining – by 27.5 percent, 52.6 percent and 38.1percent, respectively.

Ratios were reported to have more than doubled in the Bahamas, Barbados and Trinidad/Tobago. This may be an artefact of the changes in the process for arriving at the estimates, but may also be a function of better reporting as well as the relationship with the increasing HIV epidemic in the region.

Ideally all countries would need to establish a process for undertaking reproductive age surveys to ensure that the WHO does not overly adjust reported data as well as to arrive at more accurate measures of maternal mortality. Based on the reported data, it seems unlikely that the Caribbean will achieve the goal of reducing maternal mortality by 75 percent by 2015.

Maternal mortality: populations less than 250,000

For smaller countries, the goal is zero maternal deaths per year. When evaluated across five year intervals, an estimate of the maternal mortality ratio can be made, especially where the population exceeds 50,000. Antigua and Barbuda, Dominica, St. Lucia and St Vincent and the Grenadines report deaths consistent with ratios between 30 and 75/100 000 live births with no clear indication that anything has changed over the review period. The organization of services for high risk women needs to be examined with a view to effecting improvements.

Infant mortality

Pregnancy complications also adversely impact the newborn. For this reason the infant mortality rate (IMR) may be used as an indirect measure of the risks to the mother, especially when more than 65 percent of infant deaths are neonatal deaths occurring around the time of birth. Little difference is seen among the countries reviewed, with high to very high rates observed in Haiti (79/1000 live births), Guyana (54) and Suriname (31) and moderate rates in the other countries (12-20/1000 live births). This variable also suffers from under-reporting, especially those deaths occurring around the time of birth.[35]

General Observations:

The MDG goal is to reduce maternal mortality by 75 percent by 2015. Based on current estimates the region may not achieve this target as maternal mortality ratios have shown little change over the last decade. The region is faced with the paradoxical situation in which high rates of skilled attendance at delivery (except Haiti), have not translated into the expected improved outcome for mothers and their infants. An in depth study in the Dominican Republic concluded that "geographic access and availability of institutional delivery do not necessarily translate into access to high quality services or a reduction in maternal mortality."[36] Implicit in the availability of access to institutional delivery is the expectation that:

- ∉ institutional delivery implies appropriate care
- ∉ institutional delivery implies care by skilled clinical staff
- ∉ having adequate numbers of staff implies having trained staff
- ∉ trained staff have the knowledge and skills required for safe labour and delivery
- ∉ trained staff have positive attitudes and are motivated to provide quality care
- ∉ there is adequate support in terms of training, staff deployment, and functioning supervisory systems
- ∉ the system (government or hospital) has designed supporting policy, guidelines and standards and ensured staff buy-in through appropriate orientation and operationalization.

In the Caribbean obstetric services are plagued by staff shortages, exacerbated by the region's difficult economic situation. Many families opt for migration and professionals such as midwives are particularly attractive to recruiters from the developed countries.

Capacity of the region to achieve the maternal health MDG target

To achieve maternal mortality ratios between 15-35/100 000 live births, significant investment in training both basic and specialist personnel and the upgrading of existing facilities are needed. Resources need to be directed toward targeting under-served populations who disproportionately contribute to these poor outcomes. National health insurance schemes, health promotion and improved quality of care would need to be developed.

Safe motherhood interventions have to be embedded in a broader approach aimed at ensuring an improved quality of care. A successful strategy must be based on adequate political commitment, appropriate legislation and the existence of national awareness of the use of midwifery services for normal deliveries with the possibility for referral in case of difficulties.[37]

In order to monitor the capacity to achieve these goals, more sensitive indicators such as the UNICEF/WHO/UNFPA process indicators aimed at monitoring the availability, utilization and quality of obstetric services are needed. These examine the availability of basic emergency obstetric care (midwife and surgeon); the availability of comprehensive emergency obstetric care (obstetrician); the met need for emergency obstetric care, including Caesarean section and case fatality rate (among complicated cases). At present none of these variables is routinely collected in the Caribbean, but they would complement the MDG indicators.

The incidence of Caesarean delivery (which should range between 5 and 15%) and the proportion of complicated cases managed by an obstetrician (met need for emergency obstetric care) would provide evidence of the capacity of the health system to respond appropriately to obstetric emergencies, given the already high prevalence of institutional delivery.

Vulnerable women

Poverty, illiteracy and maternal mortality are interrelated. Larger countries have to address the needs of vulnerable groups. Areas with potential problems include rural communities generally, north east and southern regions of Jamaica, southern Trinidad, and the hinterlands of Guyana and Suriname, where populations of Amerindians and Maroons, respectively, live with limited access to health care. In smaller territories with no obstetrician, insurance systems are needed to cover the high cost of transferring high risk women to countries where they can access obstetric care. A new problem observed in Jamaica is the risk posed by violence to pregnant women.[38]

Recommendations

General

(i) Given the relatively high maternal mortality ratios (WHO defines ratios >100/100 000 as high), an effort should be made to document the success stories in Latin America and the Caribbean, (such as Cuba and Costa Rica), so that other countries could learn from these experiences the type of interventions that are likely to contribute to achieving the goal of 15-35 deaths per 100 000 live births.

(ii) The quality of care must also be addressed. Suitable standards need to be developed and implemented, together with monitoring service delivery, including patient satisfaction. At a minimum these should include:

(a) Protocols for managing the principal obstetric emergencies (complications of abortion, pre-eclampsia/eclampsia, haemorrhage, embolism, puerperal infection) and medical complications (sickle cell disease, diabetes mellitus, HIV in pregnancy).

(b) Routine audit of complications of pregnancy to ensure that management is consistent with established guidelines and to remedy inadequate care quality. Audit of maternal deaths should examine underlying social risk factors which limit access to emergency care.

(c) Improving women's satisfaction with services. Where services fail to respect women's needs, they will be reluctant to use them. This includes family planning services, early attendance for antenatal care, use of referral services, post natal and 'well baby' services.

(d) More sensitive process indicators need to be monitored. The first task is to ensure that the health management information systems can routinely generate good quality information. These should include information on:

(a) total births;

(b) percentage of women screened during pregnancy for HIV, anemia, syphilis;

(c) HIV prevalence among women screened;

(d) percentage of HIV positive women receiving anti-retroviral therapy (ART);

(e) percentage babies of HIV positive women receiving ART;

(f) percentage of women with antepartum complications having access to obstetric consultation;

(g) percentage of women having a skilled birth attendant (doctor or midwife);

(h) percentage of women having a caesarian delivery;

(i) HIV prevalence at 6 weeks/3 months among infants of HIV positive women.

(e) Underlying socio-economic risk factors need to be addressed by maternal and community education, and developing social infrastructure to address problems limiting access to care.

Countries with population greater than 250 000

(iii) Direct obstetric complications account for 80 percent of maternal deaths. Efforts must be directed to reduce deaths associated with the major killers – hypertension in pregnancy, haemorrhage and infection. The primary care team (both public sector midwives and private general practitioners) must educate mothers to recognize complications; efficiently refer women who need specialist care; and follow up referrals with repeat visits to ensure that women make maximum use of referral services.[39]

Countries with population less than 250 000

(iv) Each country should have at least one comprehensive obstetric care facility. Where only basic services are available, a clearly written strategy should be formulated for the identification and referral (by air ambulance if necessary) of women who need specialist care. Receiving territories need to establish maternity waiting homes to house these women from 36 weeks gestation until delivery and, possibly, up to one week after birth.

(v) In countries without obstetricians, women with complications must be referred overseas. Strategies to finance referral must be integrated into the health budget to ensure that women are not denied care due to inability to pay. The provision of national health insurance for vulnerable persons could be one such strategy.

(vi) In any referral system, but especially in the case of inter-country referrals, it will be necessary to establish systems to ensure continuity of care between referring and receiving care providers.

Conclusion

The MDGs speak to women's social status. Where women are well educated, can earn a living wage, provide for themselves and their children, have health insurance and are safe, fertility declines, replacement fertility is achieved, and risks associated with pregnancies which are 'too many, too often, too late (in life)' are reduced.

Table 1: Caribbean Countries and territories, demographic indicators

Countries	Population 2002[40]	Human Development Index rank 2002[41]	HIV prevalence 15-49 (%)	Crude birth rate[b,c] (per 1000 population)	Total fertility rate[42] (mean number of children/ woman)	Contraceptive prevalence rate[c] (%)
CARIBBEAN		2002	1995-2000	1995-2000	1998	1995-2001
States with population > 250 000						
Bahamas	312 000	49	3.5	20	2.6	62x
Barbados	269 000	27	1.2	12	1.5	55
Belize	236 000	67	2.0	27	3.6	56
Guyana	765 000	92	2.7	22	2.3	41x
Haiti	8 668 000	150	6.1	30	4.4	28
Jamaica	2 621 000	78	1.2	21	2.5	66
Suriname	421 000	77	1.2	22	2.2	40
Trinidad and Tobago	1 306 000	54	2.5	14	1.6	38
States with population < 250 000						
Antigua and Barbuda	65 000	56	…	21	1.7	53
Dominica	70 000	68	…	17	2.9	50x
Grenada	94 000	93	…	18	2.8	54x
St. Kitts and Nevis	47 000	51	…	21	2.6	41
St. Lucia	151 000	71	…	21	2.4	47
St. Vincent and the Grenadines	115 000	80	…	20	2.8	58
TOTAL	**15 080 000**		**2.3**			
RANGE:		**27-150**	**1.2-6.1**	**12-30**	**1.5-4.4**	**28-66**

… Data not available

Table 2: Caribbean territories, reproductive performance

Countries	Estimated births/ year[43]	Estimated IMR	Estimated maternal mortality ratio (deaths/100 000 live births)		Prevalence of skilled attendance at birth[c] (%)	
CARIBBEAN		1998-2000	1995[44]	2000[45]	1990-95	1996-2000
States with population > 250 000						
Bahamas	6000	13	21	60	…	99
Barbados	3500	12	33	95	100	91
Belize	6000	34	140	140	77	83
Guyana	17 000	54	150	170	95	86
Haiti	256 000	79	1100	680	23	24
Jamaica	54 000	19	120	87	79	95
Suriname	8700	31	230	110	98	85
Trinidad and Tobago	19 000	17	65	160	98	96
States with population < 250 000			Ratio [No. deaths in 5 years]			
Antigua and Barbuda	1400	17	[0]	65	100	100
Dominica	1300	24	50 [3]	65	99	98
Grenada	1800	20	[1]	…	99	99
St. Kitts and Nevis	850	20	99 [3]	130	82	99
St. Lucia	3120	17	30	30	99	100
St. Vincent and the Grenadines	2230	22	55 [7]	67[6]	100	100
TOTAL	**387 100**		**190**	**190**		
RANGE:		**12-79**	**21-1100**	**30-680**	**23-99**	**24-99**

… Data not available

HIV/AIDS, Malaria and Other Diseases

Introduction

The targets and indicators of the sixth Millennium Development Goal (MDG) are set out in the box below:

GOALS	TARGETS	INDICATORS
Goal 6: Combat HIV/AIDS malaria and other diseases	*Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS*	∉ HIV prevalence among 15- to 24-year-old pregnant women ∉ Contraceptive prevalence rate [b] ∉ Number of children orphaned by HIV/AIDS
	Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	∉ Prevalence and death rates associated with malaria ∉ Proportion of population in malaria-risk areas using effective malaria prevention and treatment measures ∉ Prevalence and death rates associated with tuberculosis ∉ Proportion of TB cases detected and cured under DOTS

According to UNAIDS estimates, in December 2003 the HIV prevalence rate in the Caribbean (including Cuba and the Dominican Republic) was between 1.4 and 4.1 percent, with between 410,000 and 720,000 adults and more than 20,000 children across the region living with the disease.

The December 2003 UNAIDS Global Report states that (official) national HIV prevalence has reached or exceeded 1 percent in 12 countries, all of them in the Caribbean Basin. The most recent national estimates showed HIV prevalence among pregnant women reaching or exceeding 2 percent in the Bahamas, Belize, Guyana, Haiti and Trinidad & Tobago. (Source: http://www.unaids.org). More detailed data for selected individual CARICOM countries are shown in Table 1.

The information presented in Table 1 reveals a wide variation in prevalence within the region, ranging from a high of 5.6 percent in Haiti to 1.2 percent in Jamaica. Nevertheless there is no clear picture of the actual extent of the disease across the Caribbean. The fact that information can be presented for only eight countries points to a major data limitation. Similarly, overcoming this limitation poses a special challenge to the smaller countries of the region which will have to increase the number of trained staff and deploy more resources in order to ensure comprehensive and reliable data collection. A further limitation derives from the fact that most of the HIV/AIDS statistics in the Caribbean is based on the reporting of AIDS cases and not HIV status. Because AIDS - related stigma and discrimination are rampant throughout the region, there is considerable under reporting of such cases. In addition, many AIDS

diagnoses and much of the treatment take place in private facilities or outside the country to which the person belongs, and hence are not included in official statistics.

It is generally acknowledged that these limitations and weak HIV surveillance systems make it difficult to gauge the actual size of the HIV/AIDS problem in the Caribbean, which may be larger than the published statistics indicate. In order to compensate for under-reporting, UNAIDS estimated in 2000 that the officially reported figures should be adjusted upwards by about 40 percent. It is very likely that the total number of cases would be found to be even higher if estimates were based on more systematic and up-to-date sentinel reports.

Table 1: HIV Data for Selected CARICOM Countries
(the latest published data by country - 2004)

Country	Adult (15–49) HIV Prevalence Rate (%)	Total Number of Adults Infected (15–49 years)	Female Infections (% of adult infections)	AIDS Orphans (number of currently living children aged 0–14 who have lost one or both parents to AIDS)
The Bahamas	3.5	6,100	44.3	2,900
Barbados	1.5	2,500	32.0	No data
Belize	2.4	3,500	37.0	950
Guyana	2.5	11,000	51.0	4,200
Haiti	5.6	260,000	58.0	280,000
Jamaica	1.2	21,000	48.0	5,100
Suriname	1.7	5,000	34.0	1,700
Trinidad & Tobago	3.2	28,000	50.0	3,600

Source: UNAIDS Epidemiological Fact Sheets, 2004 Country Updates. The figure for the Bahamas is taken from the 2003 Country Update. In the case of the other countries, the AIDS orphans figures are also based on the 2003 Updates.

The Start of the Epidemic

It is likely that the seeding of the human immunodeficiency virus (HIV) in the Caribbean occurred almost simultaneously in several countries during the 1970s and early 1980s. Haitians were the first Caribbean nationals in whom the acquired immunodeficiency syndrome (AIDS) was reported, although it is clear in retrospect that cases were also occurring elsewhere in the region. In Jamaica, the majority of the first twelve cases were returning residents, either heterosexual farm workers returning from the U.S.A. or male homosexuals who had lived for extended periods in the U.S.A. Similarly, in St Vincent and the Grenadines, several early cases were also farm workers returning from the U.S.A..

Propagation of the epidemic

Concerns about the transmission of HIV/AIDS in the Caribbean have focused mainly on its spread via sexual contact. In every country, a major factor that determined the early spread of HIV/AIDS was multiple sexual partnering – either contemporaneous or serial.

In the years before commercial testing for antibodies to HIV was available, blood transfusion contributed in a limited way to the spread of the disease in some countries. However, by the mid- to late-1980s, measures were put in place to screen donated blood for HIV antibodies in most Caribbean countries. Across the region, a high standard of nursing and medical care limited the spread of the virus via syringes, needles and other equipment. In the Endlish-speaking Caribbean and Haiti, intravenous drug use is extremely rare, and therefore (unlike the experience of Puerto Rico and Bermuda)[46], this means of transmission of HIV is correspondingly very uncommon in these countries.

A multiplicity of factors combine to influence sexual propagation of the disease. Factors operating at the personal and community level include ignorance, with an accompanying failure to recognise the link between risky behaviour and the likelihood of contracting the disease, denial of risk and the relative vulnerability of certain persons through power differentials, often related to poverty, gender or age. At the institutional level, the conscious or unconscious unwillingness of leaders and planners to assess and address the real threat posed by the disease in the early years of the outbreak hindered strategic planning and the mobilizing of resources for prevention and mitigation of its impact. This has contributed indirectly to the spread of the disease.

Certain demographic, socio-cultural and environmental factors also play an important role in facilitating the spread of the disease. First, in the population of most Caribbean countries there is a proportionately large number of persons in the sexually active age group. Another factor is urbanization, which is an on-going phenomenon in Caribbean societies. Urban life, with its pockets of poverty and overcrowding, mixing of relative strangers and the availability of opportunities for the entertainment and trading of sex, provide a setting for risky sexual behaviour. Regional and international travel for work, study or recreation which is a common feature of the life style of Caribbean people, involves increased exposure and risk.

Socio-cultural practices related to sexual behaviour are still being studied and elucidated in the Caribbean. Some practices which have been documented include early sexual initiation of many boys and girls, the frequent acceptance of multiple partners for men and a relatively high rate of change of steady sexual partners. One Jamaican study documented a statistically significant association between use of marijuana immediately before having sex and a past history of sexually transmitted infection, suggesting a possible risk for contracting HIV infection now that carriers of the virus are present in various communities. In addition, there are misconceptions about the cause of the disease and also certain myths related to its cure.

Stigma and discrimination associated with the disease contribute to its further spread through lack of disclosure and a general reluctance to participate in HIV testing. Stigma and discrimination also cause social isolation of persons living with AIDS (PLWHA), resulting in great physical and emotional suffering. Stigma ultimately prevents the accurate assessment of the scale of the problem and frustrates national, regional and international efforts to tackle it.

With regard to HIV/AIDS status, there are, in fact, three groups of persons in the Caribbean – those who have become infected and are aware of their status, those who have become infected and do not know it, and those who are not infected. The risk that the disease would spread is from the first two groups to the rest of the community. Programmes that encourage confidential, voluntary counselling and testing for HIV antibodies are being undertaken across the Caribbean and will therefore be important in reducing the number of HIV-positive persons who are ignorant of their serostatus.

As in other parts of the world, the trajectory of the epidemic in the Caribbean indicates a drift towards infection of a larger number of women and towards the poorer socio-economic segments of the population. Finally, PLWHA are increasingly susceptible to poverty and marginalisation, because of stigma and discrimination.

The Regional and International Response to HIV/AIDS in the Caribbean

The CARICOM and CARIFORUM Secretariats have emerged as the major pillars of an organized regional response to the HIV/AIDS epidemic. In 1998, under CARICOM leadership, a Caribbean Regional Strategic Plan of Action for HIV/AIDS (1999-2004) was developed by a multi-lingual Caribbean Task Force on HIV/AIDS and in 2001 a Pan-Caribbean Partnership against AIDS (PANCAP) was officially launched.

PANCAP is an association of Governments, regional and international non-Governmental organizations (including the Caribbean Network of persons living with HIV/AIDS (CRN+), the Caribbean Conference of Churches (CCC) and the Caribbean Division of the International Red Cross and Red Crescent Society, employers' groups, regional and international labour organizations, representatives of Caribbean youth, international financial and technical support agencies and the Joint United Nations AIDS Programme (UNAIDS) together with all of its contributing UN agencies. The PANCAP administrative office is located in the CARICOM Secretariat in Guyana and its steering committee is chaired by the CARICOM Assistant Secretary General responsible for human and social development. The work of PANCAP is carried out in close collaboration with national Governments and HIV/AIDS "Country Coordinating Mechanisms."[47]

The Caribbean Regional Strategic Plan for HIV/AIDS is based on a Report prepared by the World Bank, which sought to lay "the ground work for an expanded and coordinated regional response to the HIV/AIDS epidemic in the Caribbean" and to "provide guidance to Caribbean countries for the design and implementation of more effective national programmes." The Plan itself covers the following six main areas; namely advocacy, policy development and legislation; care and support for people living with HIV/AIDS; prevention and transmission among young people; prevention and transmission among the vulnerable population; prevention of Mother-to-Child HIV Transmission; and the strengthening of regional and national response capabilities.

A number of Caribbean organizations have been assigned lead roles in the regional response carried out in conjunction with CARICOM and CARIFORUM. These include the Caribbean Development Bank (CDB), the Caribbean Epidemiology Centre (CAREC), the Caribbean Health Research Council (CHRC), the Caribbean Network of HIV-seropositive persons (CRN+), the Joint United Nations AIDS Programme in the Caribbean (UNAIDS, Caribbean), the United Nations Development Programme (UNDP), and the University of the West Indies (UWI). In addition, a Coalition of Caribbean National AIDS Programme Coordinators (CCNAPC) has been established as a legal entity with support from CARICOM, CAREC and external donors.

In a number of countries, adjustments to the external economic shocks of the 1980s and 1990s together with rising levels of debt, have meant that the human and financial resources available for dealing with the epidemic, even from the limited perspective of treating it principally as a health concern, are inadequate. In particular, the region has experienced difficulty in developing a stable cadre of qualified persons needed to guide and implement an effective response to the challenges presented by HIV/AIDS. However, during the past five years, more holistic regional and national responses to the HIV/AIDS crisis have emerged. The catalyst for this development has been provided by a series of high-level meetings of heads of state and government throughout the region. These efforts are gradually ushering in an era of growing public awareness, increased HIV/AIDS visibility, and greater political commitment to confront the epidemic in all its manifestations. However, individual National AIDS Programmes vary in strength and level of authority. Some are still not equipped with the requisite capacity to ensure that the epidemic is addressed comprehensively and effectively.

During the last four years, there has also been increased international commitment to assist Caribbean countries and relevant national institutions to intensify their response to the epidemic. Financial assistance has been provided by the European Union to enhance the capacity of five regional institutions[48] to respond to HIV/AIDS needs and by the World Bank, which has instituted a US$155 million dollar multi-national HIV/AIDS prevention and control programme[49] and has approved a smaller grant to PANCAP. The Global Fund against AIDS, Tuberculosis and Malaria (GFATM) has also recently approved grants to PANCAP, Belize, Guyana, Haiti, Jamaica, the Organization of Eastern Caribbean States (OECS) and Suriname.

Increased technical and financial support has been forthcoming from other agencies, including UNAIDS, the United States Agency for International Development (USAID), the Canadian International Development Agency (CIDA), the European Union and the Deutsche

Gesellschaft für Technische Zussamenarbeit (GTZ). Other sources of financial and technical support include the US President's Emergency Plan for AIDS Relief (PEPFAR), the Centers for Disease Control and Prevention Global AIDS Program (CDC GAP), the US Health Resources and Services Administration (HRSA), the US-based International Training and Education Center for HIV/AIDS (I-TECH), the Governments of France and the Netherlands, Association Francois Xavier-Bagnoud, and the Clinton Foundation. Under these programmes, emphasis has been placed on assisting the most seriously affected countries while continuing to address the needs of other countries.

National authorities and donor agencies are naturally eager to document the impact of their contributions to the HIV/AIDS response, but it is clear that there will be a time lag before a measurable change in incidence and prevalence rates become evident across the region. Available data indicate that the epidemic continues to spiral upwards, although it appears that in a few countries this trend is being reversed.

From a practical perspective, five new developments in the Caribbean response to HIV/AIDS are worth highlighting because of their potential to assist in curbing the epidemic. These are: (1) the move in several countries to adopt nation-wide voluntary confidential counselling and testing (VCCT) for HIV, (2) a policy of incorporating active preventive programmes in the care of persons living with HIV/AIDS (PLWHA), with an "emphasis on prevention of transmission by HIV-infected persons"[50], (3) the increasing availability of affordable and supervised antiretroviral therapy (ART), (4) the provision of free anti-retroviral drugs (ARVs) for pregnant women in national programmes for the prevention of mother-to-child transmission of HIV, with follow-up of mothers and their spouses after childbirth and treatment of these adults where necessary (pMTCT plus) and (5) the provision of anti-tuberculous drug therapy free of cost to patients in the worst affected countries.

The negotiations with pharmaceutical companies aimed at reducing the price of ARVs and drugs used for treating opportunistic infections in persons with HIV/AIDS are beginning to bear fruit and, consequently, these drugs are becoming available to larger numbers of patients. Generic antiretroviral drugs are being imported from India and some are being manufactured on a small scale in Guyana. Certain countries, notably Barbados and Trinidad & Tobago, have committed funds to provide ART free of cost to all persons with HIV/AIDS who satisfy qualifying criteria.

In parallel with the developments outlined above, a Caribbean HIV/AIDS Regional Training Network (CHART) was launched in 2003 with financial support from CDC GAP, USAID, HRSA and UNAIDS and technical support from I-TECH. Additional funding for CHART has been earmarked in the GFATM grant to PANCAP. The network includes centres in the Bahamas, Barbados, Haiti, and Jamaica and a Regional Coordinating Unit at UWI. The initial goal is to provide training opportunities for all relevant categories of health care workers in every participating country, including countries which do not have training sites, in order to improve the availability and quality of care and support to Caribbean persons living with HIV/AIDS. CHART curricula will place emphasis on training for VCCT; accurate diagnosis and tracking of HIV/AIDS; the delivery of ART; principles and practice of pMTCT plus; and treatment of other STIs and opportunistic infections including tuberculosis. CHART Faculty will be drawn from both within and outside of the Caribbean.

Malaria and Tuberculosis in the Caribbean

Malaria remains endemic in the mainland countries, namely Belize and Guyana, and on the island of Hispaniola. The disease has been eradicated from local populations in all other Caribbean islands, but these countries maintain surveillance for reported cases because of the continued presence of the mosquito vector. Small outbreaks of malaria have occurred among the local population in Grenada and Trinidad and Tobago in recent years, but these have been quickly brought under control.

Belize, Haiti and Guyana have recently received grants from GFATM to help tackle this mosquito-borne disease. Eliminating malaria from mainland countries, such as Belize, Guyana and Suriname, is a much more difficult proposition because the magnitude of the effort required to ensure mosquito control across their vast territory. However, with an improved national programme and international cooperation, better containment of the disease by 2015 is possible. The likelihood of eradicating malaria from Haiti would increase if a joint effort is made between that country and the neighbouring Dominican Republic, with which it shares a land border.

The incidence and prevalence of **tuberculosis** vary widely across the Caribbean. Countries with the highest documented prevalence rates include Haiti and Guyana. The interaction between tuberculosis and HIV/AIDS to the detriment of infected persons is well documented in Southern Africa. The two leading HIV/AIDS treatment centres in Haiti have adopted an aggressive, protocol-based

approach to the treatment of persons with tuberculosis, many of whom are also HIV-positive. Other CARICOM countries should adopt this model. Based on the African experience, it is imperative that all countries in the Caribbean develop suitable operational plans to treat both diseases.

Towards achievement of Millennium Development Goal 6 in the Caribbean.

The stated target is to "halt and begin to reverse the spread of HIV/AIDS and the incidence of malaria and other major diseases by the year 2015."

HIV/AIDS

Some countries in the region are already beginning to report progress toward the stipulated target. These include the Bahamas, Barbados, Haiti and Jamaica. The last three are reporting either a slowing of the rate of increase of cases of HIV/AIDS or, in the case of the Bahamas and Haiti, a clear decrease in the number of newly reported cases. The challenge for the countries in the region is to ensure accurate reporting and tracking of the disease, to avoid national complacency and to consolidate the gains already made.

Some recent developments augur well for the region in terms of the likelihood of achieving the target of MDG 6. These include the continued endorsement and progressive growth of the Pan-Caribbean Partnership against AIDS (PANCAP); evidence of stronger commitment by political leaders to the cause; increased financial and technical support to PANCAP and to individual countries in the region; a clear commitment to build multidisciplinary capacity through training programmes, including graduate training at UWI and the multi-national CHART programme; and a clear commitment by PANCAP and several of its partners to establish and standardize a set of indicators and to develop the necessary capacity to monitor and evaluate M&E processes, outcomes and impact in relation to national and regional responses to the epidemic. Establishing M&E programmes at the national and regional level is a major strategic and operational priority, which should be actively supported by all stakeholders.

If the target with respect to HIV/AIDS under **MDG** 6 is to be achieved, further progress must be made among CARICOM countries and their partners in the following areas: development and consolidation of national-level plans that are in harmony with the regional strategic plan for HIV/AIDS; systematic strengthening of infrastructure and building of the necessary human resource capacity to execute operational plans; better co-ordination on the part of donors and the UNAIDS co-sponsors; clarification of roles and responsibilities between agencies to avoid duplication of effort and improve efficiency; expansion of the HIV/AIDS response from the health sector into all other relevant sectors; development of greater resolve in facing the sensitive issues of sex tourism, the commercial sex industry, men who have sex with men, and the early age of sexual activity; consolidation of monitoring and evaluation programmes at the national and regional level, using standardized indicators; and improving communication within and among national and regional agencies.

The region should also incorporate or adapt best practices from other parts of the world, especially Sub-Saharan Africa and South-East Asia, while sharing its own experiences with others. While the people of the region gain knowledge and skills and assume leadership responsibility, it will be necessary to continue to collaborate at all levels with international partners in order to maximise the impact of the response to HIV/AIDS.

Having said this, the achievement of the target of halting by 2015 and beginning to revise the spread of HIV/AIDS, while possible, presents a major challenge for the Caribbean which will require the allocation of substantial resources in support of this effort.

Malaria

As mentioned earlier, the likelihood of eradicating malaria from Haiti by 2015 would increase if a joint effort is made between that country and the neighbouring Dominican Republic, with which it shares a land border. Eliminating malaria from mainland countries such as Belize, Guyana and Suriname is a much more difficult proposition because of the effort that will be required to ensure mosquito control across their vast territories, which invariably have fairly isolated communities in the interior of these countries. A multi-faceted approach, including stronger political will at the national, regional and international levels, sustained public education

and health promotion programmes for local populations, improved environmental hygiene to reduce mosquito breeding sites, the consistent use of impregnated mosquito nets, the judicious use of anti-malarial drugs and perhaps the release and administration of new vaccines will contribute to a realisation of the target. The success of this effort will require adequate financial support and designated staff to carry out appropriate activities in the affected countries.

Tuberculosis

The recent acquisition of external financial and technical assistance for the treatment and control of tuberculosis together with HIV is an encouraging start toward achieving the stated target of halting the spread of, and beginning to reverse the trends in, tuberculosis by 2015. It will be necessary however, to strengthen surveillance systems and laboratory diagnostic and monitoring capacity as part of the effort to curb tuberculosis and other mycobacterial infections that complicate HIV/AIDS. Specific personnel must be commissioned to carry out the training and field work. In addition, the established association between social variables such as poverty, malnutrition, inadequate housing and lack of education, which often work in combination to increase the risk of contracting tuberculosis and increase the morbidity and mortality from that disease will need to be borne in mind. These social factors also interact to determine susceptibility to, and to adversely affect the clinical course of, HIV/AIDS.

Finally, there is an urgent need in the Caribbean to tackle the issue of stigma and discrimination among health-care providers, administrators, community leaders, family members and the general public in relation to HIV/AIDS and tuberculosis in particular. Laws pertaining to the protection of the rights of PLWHA and the health of the public in the Caribbean must be revised as a matter of priority, since this would provide the necessary back-drop for achieving success in prevention, care and treatment of these diseases.

Ensuring Environmental Sustainability

Introduction

The current MDG targets and indicators for goal 7 are as follows:

Table 1: Targets and indicators[51]:

Targets (from the Millennium Declaration)	Indicators for monitoring progress
Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	25. Proportion of land covered by forest 26. Ratio of area protected to maintain biological diversity to surface area 27. Energy use (kg oil equivalent) per $1 GDP (at PPP) 28. Carbon dioxide emissions (per capita) and consumption of CFCs (ODP tons) 29. Proportion of population using solid fuels
Target 10: Halve, by 2015, the proportion without sustainable access to safe drinking water and basic sanitation	30. Proportion of urban and rural population with sustainable access to an improved water source 31. Proportion of urban and rural population with access to improved sanitation
Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	32. Proportion of households with access to secure tenure (owned or rented)

Progress under this goal has been uneven, for a number of reasons[52]. However, many of the stipulated targets and indicators do not currently reflect the main environmental or sustainable development issues in the region, and should therefore be significantly adapted to take account of Caribbean priorities.

Reliability of data

As was mentioned earlier in the report, there are known problems with available data from the region[53]. These problems are being gradually addressed, but there are still significant gaps. The general quality of regional environmental data is low, as few countries have the necessary systems in place to collect quality-assured environmental data on a regular basis. In addition, much of the data that is available was generated in *ad hoc* studies, and cannot therefore be used to calculate trends. With that caveat, the data presented below is drawn from the most reliable available sources, in particular the UNEP GEO SOE Reviews.

Progress towards the Millennium Development Goals in the Caribbean

Table 2: Indicator 25 - Land covered by forest [54]

CARICOM countries

Country	**Land area (1000ha)[55]**	**Forest area (1000ha)**				**Annual average change in forest area (%)**
		Total 1990	Total 1995	Natural 1995	Plantation 1995	
Antigua and Barbuda	44	9	9	9	0	0.0
Bahamas	1,001	180	158	158	0	-2.6
Barbados	43	-	0	0	0	-
Belize	na	na	na	na	na	na
Dominica	75	46	46	46	0	0.0
Grenada	34	4	4	4	0	0.0
Guyana	21,490	16,500	16,500	16,500	0	0
Haiti	2,756	25	21	13	8	-3.4
Jamaica	1,083	254	175	160	15	-7.2
Montserrat	10	3	3	3	0	0.0
St Kitts and Nevis	36	11	11	11	0	0.0
St Lucia	61	6	5	5	0	-3.6
St Vincent and the Grenadines	39	11	11	11	0	0.0
Suriname	16,147	15,500	15,500	15,500	0	0
Trinidad and Tobago	513	174	161	148	13	-1.5

The countries and territories of the region for which data are available are deforesting at an average rate of -1.7 percent per annum. No country shows a positive trend, but some appear to have stabilized, with no net losses over the five year period (1991- 1995). Thus the problem is concentrated in a few countries with high rates of deforestation, in particular Jamaica, St Lucia and Haiti. These countries are not currently on track to meet the relevant MDG target. It should be noted, however, that some of the national data for tree cover in the Caribbean is not entirely reliable, given the general absence of satellite surveys and GIS mapping of the terrain[56]. Some discrepancies between surveys may also result from differences of definition; forest land in some countries may be significantly degraded (i.e. reduced from mature to scrub) but still assessed as forested [57,58].

It should also be noted that there are various ecologically and socially important woodlands in the Caribbean islands, and that some of these are undoubtedly under too much pressure, but the global problem of deforestation relates predominantly to the larger tropical and sub-tropical islands and continental countries in, for example, South America and South-East Asia. This is one example of an area of genuine global concern that does not necessarily accord exactly with the issues that are of most pressing concern for the Caribbean island countries.

Table 3: Indicator 26 - protection of biodiversity [59]

Country	Protected areas [60]. (1997)

	Total		Wild area		Parks		Natural Monuments		Habitat manage-ment area		Protctd land-scapes		Managed resource protected area	
	No	km² [61]	No	km²	No	km²	No	km²	No	km²	No	km²	No	km²
CARICOM countries														
Antigua and Barbuda	11	66	0	0	5	66	0	0	3	0	3	0	0	0
Bahamas	38	1475	1	18	10	1421	0	0	27	18	0	0	0	0
Barbados	6	2	1	0	1	2	1	0	3	0	0	0	0	0
Belize	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Dominica	7	170	0	0	3	75	0	0	1	0	0	0	3	95
Grenada	1	6	0	0	0	0	0	0	0	0	0	0	1	6
Guyana	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Haiti	8	97	0	0	2	75	0	0	0	0	6	22	0	0
Jamaica	142	982	0	0	2	15	1	0	2	0	0	0	137	967
Montserrat	18	10	1	0	2	8	6	0	1	0	1	0	7	2
St Kitts and Nevis	2	26	0	0	2	26	0	0	0	0	0	0	0	0
St Lucia	46	97	1	0	1	0	1	0	28	23	0	0	15	74
St Vincent and the Grenadines	25	82	0	0	0	0	0	0	25	82	0	0	0	0
Suriname	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Trinidad and Tobago	14	210	3	26	0	0	0	0	9	149	0	0	2	35

Table 4: Indicator 26 - protection of biodiversity (1997)

Country	Land area (km²)	Protected areas (km²)	Percent protected[62]
CARICOM countries			
Antigua and Barbuda	440	66	15
Bahamas	10,010	1475	14.7
Barbados	430	2	0.5
Belize	22,800	na	na
Dominica	750	170	22.6
Grenada	340	6	1.7
Guyana	214,970	na	na
Haiti	27,560	97	0.4
Jamaica	10,830	982	9
Montserrat	100	10	10
St Kitts and Nevis	360	26	7.2
St Lucia	610	97	15.9
St Vincent and the Grenadines	390	82	21
Suriname	161,470	na	na
Trinidad and Tobago	5,130	210	4.1

There is a very varied profile across the region. Some countries have few or no protected areas, while other countries have designated very substantial areas. The reality, however, is less clear. A number of countries, for example, have designated large areas, but in some cases there is little effective enforcement or policing and insufficient financial resources to actually protect the designated areas or otherwise change the way in which people behave and utilize resources in environmentally sensitive zones. There is a general need, therefore, to find low-cost, efficient ways to protect key biodiversity resources. This will probably have to focus on increasing the involvement of local communities living in environmentally sensitive areas in environmental and resource management and *de facto* policing, as a number of the governments concerned are unlikely to be able or willing to allocate the level of increased financial and human resources required for this purpose. [63].

Table 5: Indicator 27 – energy density per unit GDP [64]

Country	Total energy consumption (million kwh)[65]	Total GDP (million US$1995)	Energy density (kwh/$)
CARICOM countries			
Antigua and Barbuda	98	481.6	0.2
Bahamas	1,340	na	na
Barbados	650.0	1,714.0	0.38
Belize	na	na	na
Dominica	37.0	265.0	0.14
Grenada	95.0	264.5	0.36
Guyana	na	na	na
Haiti	na	2,880.4	na
Jamaica	6,038.0	5,057.6	1.19
Montserrat	na	na	na
St Kitts and Nevis	88.0	224.3	0.39
St Lucia	115.0	377.4	0.30
St Vincent and the Grenadines	66.0	247.3	0.27
Suriname	na	na	na
Trinidad and Tobago	4,541.0	6,010.2	0.76

There is a marked variation in the energy input per unit of GDP across the region, ranging from 0.14 kwh per $US 1 in Dominica to 1.19 kwh per $US 1 in Jamaica. Dominica would therefore appear to be nearly nine times more energy efficient than Jamaica. Such large disparities are partly due to variations in energy efficiency, but the largest source of variance is likely to be the markedly different structure of the economies of the region. This will not only affect the energy efficiency of GDP output, it will also affect the balance of energy consumption between industry, agriculture, the service sector and domestic consumers. However, it is likely that growing disparities in energy efficiency will account for an increasing percentage of the total variance in future, for reasons that are discussed in more detail below.

This in turn highlights the way that generic targets – like the MDGs – can risk becoming irrelevant. The fundamental objective is to effect a transition onto a more sustainable development path. This then has to be translated into actual development decisions and priorities – and the priorities of a major oil and gas producer and exporter like Trinidad and Tobago will not be the same as the priorities for a country like Antigua and Barbuda that depends largely on tourism.

Table 6: Indicator 28 – CO^2 aggregate and per capita emissions [66]

Country	Total CO^2 emissions (thousand tonnes carbon)	National per capita CO^2 emissions (tonnes)

CARICOM countries

	Total 1980	Total 1996	Total 1980	Total 1996
Antigua and Barbuda	39	88	0.63	1.33
Bahamas	2,179	466	10.38	1.64
Barbados	184	228	0.74	0.87
Belize	na	na	na	na
Dominica	10	22	0.14	0.31
Grenada	13	44	0.31	0.44
Guyana	na	na	na	na
Haiti	205	292	0.04	0.04
Jamaica	2,304	2,743	1.08	1.10
Montserrat	4	11	0.35	0.99
St Kitts and Nevis	na	28	na	0.67
St Lucia	30	52	0.26	0.36
St Vincent and the Grenadines	10	34	0.1	0.3
Suriname	na	na	na	na
Trinidad and Tobago	4,552	6,069	4.21	4.68

There are marked variations across the region, but some of these are accounting artefacts. This may be illustrated by reference to the situation of some small islands which, although falling outside the Caricom framework, are nevertheless quite relevant to an understanding of the cause of these variations. The US Virgin Islands, for example, were assessed as having a rate of per capita carbon emissions (estimated at 99.0 metric tonnes in 1998) that is far higher than in the US, Australia, and other wealthy, industrial countries with high demand for transport and other carbon-intensive sectors, while the Netherlands Antilles at 36.7 metric tones in 1998 were at a level comparable with the US[67]. However, this is largely because carbon dioxide emissions are estimated, in part, on the basis of an algorithm that converts petroleum usage to CO^2 emissions. This is valid, but has the effect of making it appear that some of the world's major emitters of CO^2 per capita in the world are small islands with large tourist industries, essentially because the fuel used by cruise ships is attributed to each country, and some have very small populations. The net effect is to make it appear as if domestic per capita emissions are exceptionally large[68]. This is obviously incorrect, so later assessments introduced an arbitrary correction factor by eliminating countries with a population of less than one million[69]. This had the effect of raising Trinidad and Tobago (with a population over one million) to the top of the regional list, with 4.68 tonnes/person/year. This level is roughly commensurate with the industrial nations, but this is more plausible given the major oil and gas industries based in the country and its coastal waters. Other countries in the region average less than 1 tonne per person per year, which is about average for developing countries, although there are some remarkably low figures (some of which may also prove to involve measurement gaps and errors).

If the data is otherwise assumed to be correct, then some countries in the region are currently emitting less than the global average, and so are ahead of the MDG target, but others are emitting far more than the global average, and will have to implement drastic reforms to have any prospect of achieving the MDG.

Table 7: Indicators 30 and 31 – water and sanitation [70]

Country	Annual internal renewable water resources		Annual withdrawals		Sectoral withdrawals (%)			% population with drinking water			% population with sanitation		
	Km³	P/C (m³)	Km³	P/C (m³)	Domes	Indust	Agric	Total	Rural	Urban	Total	Rural	Urban
CARICOM countries													
Antigua and Barbuda	-	-	-	-	-	-	-	-	-	-	-	-	-
Bahamas	-	-	-	-	-	-	-	94	86	95	100	100	100
Barbados	-	-	-	-	-	-	-	-	-	-	-	-	-
Belize	-	-	-	-	-	-	-	-	-	-	-	-	-
Dominica	-	-	-	-	-	-	-	-	-	-	-	-	-
Grenada	-	-	-	-	-	-	-	-	-	-	-	-	-
Guyana													
Haiti	11.0	1,460	0.04	7	24	8	68	39	39	38	26	16	43
Jamaica	8.3	3,269	0.32	159	7	7	86	-	-	-	-	-	-
Montserrt	-	-	-	-	-	-	-	-	-	-	-	-	-
St Kitts and Nevis	-	-	-	-	-	-	-	-	-	-	-	-	-
St Lucia	-	-	-	-	-	-	-	-	-	-	-	-	-
St Vincent and the Grendnes	-	-	-	-	-	-	-	-	-	-	-	-	-
Suriname													
Trinidad and Tobago	5.1	3,869	0.15	148	27	38	35	96	88	100	96	92	97

As the table above makes clear, there are (a) large gaps in the available data and (b) marked variations among countries.

There is data for only four countries, so it is not possible to determine the regional position with any certainty. The countries with higher per capita incomes (Bahamas and Trinidad and Tobago) are close to universal supply of water and sanitation, and will therefore meet the MDG target. Haiti – predictably – has the greatest deficit, with only a quarter of the population with proper sanitation, and currently appears unlikely to meet that particular target.

The MDG goals on water and sanitation comprised one of the two strongest recommendations made at the Johannesburg WSSD Conference in 2002 (the other pertained to the management of the world's main fishing grounds). There are, however, some serious difficulties with implementation. One important argument, for example, concerns the extent to which water supply should be in private or public ownership. This relates in part to the quality and efficiency of management, and to the levels of capital and investment required to upgrade and install new infrastructure. It also relates in part to the issue of 'social water'; a debate shaped in part by established patterns of usage and expectations, and in part by issues about poverty, access to resources and health status. In the case of a remote village in sub-Saharan Africa, for example, there is no realistic alternative to community participation and control – the village has to manage its water supply, because no one else is in a position to do so. In a more developed country, however, or in most urban areas, there may be little practical role for community participation. The need for flexibility lies between these two extremes, and a more tailored approach may be required in a number of developing/transitional countries. In the case of a country like Jamaica, for example, it is not always clear whether it would be more efficient to have the National Water Commission manage the entire national water resource (the advantage here being the ability to plan, build and manage the water grid infrastructure on a relatively large scale), or whether there is a more effective role for local government (which has certain responsibilities for ensuring water supplies) or local communities. A significant number of people in rural Jamaica still get their water from a local spring, which will generally be managed by the Parish Council. Relatively little maintenance is required, beyond an annual inspection and clean-out, and so these systems tend to be quite robust. As they are progressively adopted by the National Water Commission, however, the maintenance is typically bundled into a large maintenance contract, which may result in a large increase in maintenance costs. One of the main reasons for this is that previously informal relationships become monetized. The local spring may be on private land, for

example, but the landowner will observe a traditional arrangement that allows the Parish Council and the community access to the well of the spring. Once the Water Commission has taken over control, however, the landowner may take the opportunity to charge for the water, for the use of their land and for access to the site, which will be reflected directly in the increased costs of the new management arrangements.

In practice, 'social water' includes making unauthorized (and illegal) connections to water main supply pipes. From one perspective, this is theft, and should be treated accordingly. In rural areas, however, people may be accustomed to free supplies from the local spring, and may not see why the new system is no longer free. There is even a precedent in some urban areas, where public standpipes were previously the main water supply. As services are increasingly opened up to international tender and supply, however, and as firms assess the cost of the investment and upgrading required, illegal connections are less likely to be tolerated. This indicates a need for a focused discussion on when and where (and for how long) 'social water' is still an appropriate route to meeting human needs, given the financial, environmental and public health implications of the various options, and the need to generate the revenue required to expand water supply and sanitation infrastructure on the scale needed to meet the MDG [71].

It is also important to note that part of the problems with water supply in Jamaica stems directly from failures in the public policy framework. There are several perverse subsidies, for example, which encourage uneconomic use. This includes subsidies for irrigation water, and the hidden subsidy given to those houses built high on hillsides (many of which are inhabited by wealthy people). Houses built high on hillsides pay the same domestic water rate as houses built in the valleys, even though the Water Commission then has to pump water up to houses that may be over a thousand feet above their reservoir. As a result, the Water Commission has become one of the largest consumers of electricity in Jamaica. This electricity is generated from oil, all of which must be imported. This in turn means that Jamaica's consumption of energy has been rising about four times faster than Jamaica's GDP in recent years, resulting in a falling energy density per unit of GDP. This explains the point made earlier; that growing disparities in energy efficiency may account for an increasing percentage of the total variance in energy usage between countries in future.

The need to develop an adapted set of MDGs for the countries of the Caribbean

A major problem involved in dealing with environmental sustainability in the Caribbean relates to the lack of correspondence between some of the MDG targets and the actual environmental problems of the Caribbean. The most pressing environmental problems of the Caribbean are probably those related to global climate change and to the deterioration in the state of the coral reefs. Other issues, such as the management of watersheds and supplies, solid and liquid waste disposal, deforestation, overfishing, atmospheric pollution (with particular regard to particulate content), inefficient use of energy and other resources, the conservation of biodiversity (with particular regard to endemic species) and so on are also important, but the first two issues are likely to have the most serious impact on the region, as indicated below.

Climate change

The Intergovernmental Panel on Climate Change (IPCC) estimates that the average surface temperature could rise by as much as 6 degrees by 2100. This is the upper bound, but more recent evidence suggests that the IPCC's upper bound may have to be revised upward to as much as 7 to 10 degrees. There is a risk that this level of warming might liberate methane hydrate from polar sediments, thus contributing to a further acceleration of global warming. This would probably be accompanied by a rise in mean sea level, largely because of thermal expansion of the oceans. Current projections indicate a 0.25m rise, with an upper bound of around 1m, but this could be exceeded with a mass release of methane.

The risks and costs of climate change will be unevenly distributed. Some regions could become cooler. Melting of polar ice could cause an influx of fresh water that would weaken the 'Atlantic conveyor' current that warms Western Europe, for example, causing it to become colder. This illustrates the non-linear nature of climate change, as Western Europe might initially become warmer before becoming colder[72].

There are still many profound uncertainties about the nature, causes and possible timing of global warming. It is clear, however, that the countries of the Caribbean would be particularly vulnerable to any significant degree of climate change. Much of the key infrastructure - cities and urban developments, tourism resorts, industrial infrastructure, airports and wharves – lies at or near sea level, and would therefore be threatened. The concentration of infrastructure reflects the concentration of economic activity, so that most of the GDP of the Caribbean islands is also generated in the coastal zone. Thus the social and economic viability of some of these island

countries might be threatened by significant climate change, partly by the associated rise in sea-level, and partly by the projected increase in the incidence of category four and five hurricanes.

Coral reefs

Recent research indicates that coral reefs across the Caribbean have declined very seriously in the last three decades. The scientists who carried out the most recent survey note that there has been a "massive region-wide decline of corals across the entire Caribbean basin, with the average hard coral cover on reefs being reduced by 80 percent, from about 50 percent to 10 percent cover, during the past three decades"[73]. One study showed patterns of change in coral cover varied across time periods, but were largely consistent across sub-regions, which suggests that local causes have operated at more or less the same time across the region[74]. Suspected causes of the decline include human factors such as over-fishing, pollution (primarily excess nutrient inflow), and smothering by sediments released by soil erosion and deforestation, as well as natural factors like hurricanes and disease (in particular the disease, probably viral, that wiped out a keystone species in the mid-80s, the sea urchin *Diadema antillarum).* It is important to note that only the first three factors listed above are anthropogenic. The other two are natural. Storm damage occurs frequently in the Caribbean, and is in fact part of the natural dynamic processes of coral reef ecology. The poor condition of the reefs today highlights the probable importance of these multiple 'hits'; coral reefs are probably capable of dealing with one or two of these factors at a time, but not with all of them simultaneously. The single most important remedial action is to control over-fishing, but some governments have been notably reluctant to enforce the necessary controls [75].

The situation is unlikely to improve in either the short or the long term, and the ability of Caribbean reefs to cope with future local and global environmental change might be irretrievably compromised. This in turn means that the badly damaged reefs may now be significantly more vulnerable to rising sea temperatures and periodic storm damage than would have previously been the case. The death of the reefs has profound implications for the littoral ecology, fisheries, tidal and beach formation/erosion patterns. One of the impacts of climate change, along with concurrent environmental change (such as the decline of the coral reefs), and the associated changes in in-shore currents, is that some existing beaches may erode, and the sand deposited elsewhere. This means that some beaches may move away from the hotels that have been built behind them, thus directly affecting the region's most important industry, tourism.

Conclusion

Given the extensive negative consequences likely to be associated with any significant degree of climate change, the most urgent environment-related development challenge for the countries of the Caribbean (even given the current uncertainties about the extent of the problem) is to find the most efficient and cost-effective way to manage the attendant risks. There is a range of possible strategies for dealing with hurricanes, for example, including redistribution of the risk via insurance and reinsurance, zoning to relocate buildings and other infrastructure out of vulnerable areas, changes to building regulations and retroactive stock upgrades. Each has a different pattern of costs and benefits, and therefore a different distribution of the risk of making an unnecessary investment, which has to be set against the assessment of risk of climate change, and of the particular regional and local impacts that may result. It is important to note, in this regard, that precise local impacts of climate change cannot yet be predicted with any precision. Until very recently, the smallest grid size used in most models of climate change spanned extremely large areas. It is also important to note the non-linear nature of change. There may be thresholds, for example, at which the behaviour of the local or global weather system will alter significantly. This means, in turn, that impacts cannot be plotted on a linear scale. The benefits of change may be outweighed by the costs of adaptation at one point, and not at another, but these points need not necessarily be far apart. If they straddle a threshold, for example, the balance of costs and benefits might alter markedly in between.

The task, therefore, is to devise a sensible strategy for controlling risk in a situation in which there is very significant uncertainty about several key variables. This requires a sophisticated analysis of the problem, and of the various risk management strategies open to the countries of the Caribbean.

In conclusion, therefore, the Caribbean's most pressing environmental problems – the need to adapt to climate change, and to restore the reefs - are not directly referenced in the MDG dealing with environmental sustainability, with the exception of the carbon emissions indicator. This leaves a serious doubt as to whether the targets as currently structured provides the most relevant guidelines for the Caribbean in this area. Consequently, in the case of the Caribbean, the targets under MDG7 should be recast in relation to the management of climate change and the protection of coral reefs.

Global Partnership for Development

Introduction

The targets and indicators of the eighth Millennium Development Goal (MDG) are set out in the box below:

GOALS	TARGETS	INDICATORS
Goal 8: Develop a global partnership for development	*Target12: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system (includes a commitment to good governance, development, and poverty reduction – both nationally and internationally)* *Target13: Address the special needs of the least developed countries (includes tariff and quota-free access for exports, enhanced program of debt relief for and cancellation of official bilateral debt, and more generous official development assistance for countries committed to poverty reduction)* *Target14: Address the special needs of land-locked countries and small island developing states (through the Program of Action for the Sustainable Development of Small Island Developing States and 22nd General Assembly provisions)* *Target15: Deal comprehensively with the debt problems of*	**Official Development Assistance** 33. Net ODA as a percentage of DAC donors' gross national income 34. Proportion of ODA to basic social services (basic education, primary health care, nutrition, safe water, and sanitation) 35. Proportion of ODA that is untied 36. Proportion of ODA for the transport sector in landlocked countries 37. Proportion of ODA for environment in small island developing states **Market Access** 38. Proportion of total developed country imports (by value, excluding arms) from developing countries admitted free of duties and quotas 39. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries 40. Agricultural support estimate for OECD countries as percentage of their GDP 41. Proportion of ODA provided to help build trade capacity **Debt Sustainability** 42. Number of countries reaching HIPC decision and completion points

		developing countries through national and international measures in order to make debt sustainable in the long term	43. Debt relief committed under HIPC initiative 44. Debt service as a percentage of exports of goods and services
	Target16:	*In cooperation with developing countries, develop and implement strategies for decent and productive work for youth*	45. Unemployment rate of 15- to 24-year-olds
	Target17:	*In co-operation with pharmaceutical companies, provide access to affordable essential drugs in developing countries*	46. Proportion of population with access to affordable, essential drugs on a sustainable basis
	Target18:	*In co-operation with the private sector, make available the benefits of new technologies, especially information and communications technologies*	47. Telephone lines per 1,000 people 48. Personal computers per 1,000 people

Target 12 under this heading refers to the development of an open rule-based, predictable, non-discriminatory trading and financial system. It includes a commitment to good governance, development and poverty reduction - both nationally and internationally. While the Caribbean countries subscribe to the principle of increased liberalisation, they have asserted in the various multilateral trade negotiations carried out within the World Trade Organisation (WTO), the proposed Free Trade Area of the Americas (FTAA) and the ACP-EU Cotonou Agreement, the need for special and differential treatment to be accorded them in view of their small size and relative underdevelopment. In fact in the WTO and in the FTAA negotiations the Caribbean countries have been able to secure agreement that the needs of 'small economies' should be given special consideration. Clearly therefore the countries of the region do not subscribe to a 'non-discriminatory' trading system in the strict sense of the term, even though the concept of non discrimination in the WTO context is not so narrowly interpreted as to exclude, at the present time, preferential arrangements.

Under this target, emphasis is also placed on the level of Official Development Assistance (ODA) in support of the various Millennium Development Goals, including environmental sustainability in small island developing states. While it is estimated that globally the achievement of the MDGs will require an additional US$50 - $100 billion in aid, the reality is that total ODA in 2002 amounted to US$50.2 billion or 0.22 per cent of the GDP of the member countries of the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) - which represents the lowest ratio of ODA to GDP ever recorded. Although it is projected that ODA will increase in 2004, the projected amount still falls short of the estimated requirements for the implementation of the MDGs. In recognition of the importance of adequate support from the international community the 2003 UNDP Human Development Report has called for the establishment of a Commitment to Development Index (CDI) in order to monitor how well the developed countries and other international development partners live up to their commitment under the global partnership.

In the specific case of the Caribbean, the level of ODA has shown a steady decline in recent years partly because of its declining geopolitical and strategic significance of the region in the wake of the end of the Cold War and the increasing demands of other parts of the world such as the 'transition countries' in Europe, and more recently Afghanistan and Iraq for increased development assistance.

However, it is true that an increased proportion of the remaining ODA allocation to the Caribbean which has declined from US $1.2 billion in 1998 to $400 million in 2002, has been consciously directed by donors to support environmental programmes. Some bilateral donors have in fact agreed to forgive the interest on their official debt on the understanding that the resources thus released would be allocated to find projects designed to promote environmental sustainability.

It is appreciated of course that some Caribbean countries, notably Jamaica and Trinidad and Tobago have benefited from increased foreign direct investment (FDI) but such inflow cannot fully compensate for official development assistance which will need to be increased significantly if the MDG targets are to be achieved within the specified timeframe.

Target 13 seeks to address the special needs of the least developed countries (through tariff and quota free access for exports, an enhanced programme of debt relief for and cancellation of official bilateral debt, and more generous official development assistance for countries committed to poverty reduction). In the case of the Caribbean, only Haiti is officially designated as a 'least developed country'. However, aid from a number of bilateral and multilateral resources to that country had been held in abeyance pending a resolution of domestic political issues. More recently, the political instability which preceded the departure of President Aristide and the political uncertainty which has followed in the wake of that event have been compounded by the devastation caused in the country by floods as a result of heavy rainfall in the island in May 2004. These factors have therefore prevented the country from benefiting optimally from its status as a least developed country.

In terms of debt relief, Guyana is eligible for assistance under the Highly Indebted Poor Countries (HIPC) Initiative. The country has in fact benefited from the initiative which is premised on debt forgiveness on the understanding that the resources released would be used to fund poverty eradication programmes in keeping with the priorities identified in the Poverty Reduction Strategy Paper (PRSP) prepared by the World Bank in consultation with the government. However, the Caribbean and other developing countries have called for the HIPC initiative to be further improved in order to speed up disbursements under the programme and also for debt cancellation to be extended to a wider range of developing countries. Debt relief remains an important issue for the Caribbean since it would result in the release of funds to finance the MDGs.

Regarding target 14 which addresses the special needs of landlocked countries and small island developing countries, the Caribbean countries have sought to use the SIDS Programme of Action as a basis for mobilising resources and to obtain other concessions in support of the countries of the region. In this regard, the UN General Assembly at the insistence of the Caribbean and other small island developing states in the Pacific, have consistently emphasised the need for the international community to support the development efforts of these countries. The proposed SIDS + 10 Conference to be held in Mauritius in January 2005 has the potential to identify new initiative in support of the development aspirations of these countries.

In terms of trade, the Caribbean countries have benefited from preferential access to the markets of the European Union and also attract substantial aid allocations under the ACP-EU Cotonou Agreement. This concession is accorded mainly for the export of primary commodities since the export of manufactures or processed goods is subject to tariff escalation. Similarly, the region benefits from trade concessions granted by the US initially under the Caribbean Basin Initiative (CBI) and, also under the Caribbean Basin Trade Partnership Act (CBTPA) which grants Caribbean countries treatment comparable to that granted by the US to Mexico.

Nevertheless, the preferential arrangements enjoyed by the countries of the Caribbean have come under increasing attack in the negotiations in the ACP-EU Cotonou agreement, the proposed FTAA and in WTO as the developed countries continue to press for the establishment of a liberalised global trading regime based on reciprocity. Of course, as was mentioned earlier, the Caribbean countries, as is the case with other developing countries, continue to resist the effort by defending the principle of special and differential treatment as a necessary element of international trade on the ground that the disparities in levels of development between the developed and developing countries would put the latter at a disadvantage in terms of competitiveness in a situation of unqualified free trade.

In an effort to build the trade capacity of the region, the WTO, in collaboration with the University of the West Indies (UWI) sponsored in 2004 a training programme for government officials in order to improve their understanding of the issues being negotiated within the WTO with a view to increasing their negotiating capacity. The programme was extremely successful in that it has produced a cadre of officials capable of articulating policy in respect of various trade issues and also in participating effectively in the negotiation of these issues. The University intends in future to incorporate the programme into its teaching curriculum in order to ensure the ongoing training of officials dealing with trade issues.

In order to strengthen their negotiating capacity, the Caricom countries have established the Caribbean Regional Negotiating Machinery (CRNM) as a mechanism for co-ordinating the positions of the member states of the Community in the various negotiating forums. Moreover, in order to achieve consistency in their negotiating stance, they have decided to retain the same College of Negotiators that had been appointed in the context of the FTAA for the negotiations on the proposed Economic Partnership Agreement (EPA) that is intended to replace the existing ACP-EU Cotonou Agreement.

The negotiations on agriculture are of vital importance to the Caribbean given the dependence of many of the countries of the region on primary commodities such as bananas and sugar. In respect of bananas, Caribbean countries are following closely the initiative of the European Commission to establish a new European banana import regime consistent with the requirements of the WTO. This initiative envisages the termination on January 1, 2006 of the existing quotas and related tariffs that govern banana imports into Europe and their replacement by a flat custom tariff.

This arrangement will impose increased pressures on Caribbean banana producers to increase their efficiency and productivity in order to improve their competitiveness in the European and global market. The issue therefore remains a major concern of the Caribbean, against the background of the significant economic disruption caused in Caribbean banana producing countries, notably in Dominica, as a result of the WTO ruling in 2000 on the EU banana regime.

Similarly, there is growing concern on the part of Caribbean countries that, the initial ruling by the WTO Disputes Panel in the case brought by Australia, Brazil and Thailand against the EU, would lead to the phasing out of sugar subsidies even before the termination date specified under the current ACP-EU Cotonou Agreement. Indeed, The Caribbean countries have expressed serious concern regarding the informal proposal by the European Union to amend the existing Sugar Protocol in view of its potentially adverse economic impact on the sugar producing countries of the region.

Beyond these issues, Caribbean countries like other developing countries, have urged a reduction of the massive agricultural subsidies provided by the developed countries to their domestic agricultural producers which the Caribbean countries see as putting their own producers at a significant disadvantage. Failure to achieve a compromise on this issue was one the major reasons for the collapse of the 2003 WTO Ministerial Meeting in Cancun.

More generally, the Caribbean has demonstrated solidarity with other developing countries in calling for a review of the implementation of existing WTO agreements, before embarking on the negotiation of new issues such as competition policy and transparency in government procurement. The construction of a genuine global partnership for development will therefore need to take account of these concerns.

The unemployment rate among 15 to 24 year olds is quite significant in some countries in the Caribbean. While data are not available for many countries, of the countries for which such data are available the youth unemployment figure in 2001 ranged from an estimated 38 percent in St. Lucia to 18 percent in Barbados. Within this range, Jamaica and Trinidad and Tobago recorded figures of 24 percent and 22 percent, respectively. Special emphasis has therefore been placed on strategies designed to increase growth and employment in order to deal with this problem. Unfortunately, the expansion of growth and output in the region has proved to be somewhat slugglish in recent years and has thus prevented an optimal solution to the problem of youth unemployment which continues to be a major issue in the region.

In terms of access to affordable essential drugs, while a significant number of countries have ready access to pharmaceuticals, the situation in the Caribbean is somewhat varied, ranging from an access rate of between 95-100 percent in Barbados, Grenada and Suriname to 0-49 percent in the case of Haiti and Guyana. However, with the onset of the HIV/AIDS epidemic, Caribbean countries have joined together in a Pan Caribbean Partnership and on this basis have been able to obtain important concessions from pharmaceutical companies to obtain essential drugs at an affordable price. Moreover local production of generic drugs has also increased.

Most of the countries in the Caribbean have made a concerted effort, in collaboration with the private sector to introduce modern technology, notably information and communication technologies, as is evidenced from the fact that the numbers of telephones maintained and cellular subscribers per 1000 population are 80.4 in Antigua and Barbuda, 67.9 in Barbados, 53.7 in St. Kitts and Nevis, 44.9 in Jamaica and 43.7 in Trinidad and Tobago. At the lower end, the figure for Haiti is estimated to be 2%. The region have however fared less well in terms of internet access and in the use of personal computers, since the available statistics indicate that in neither of these categories did the usage per 1000 population exceed 20. However, in keeping with the commitment of the UN

Secretary General to put an end to the 'digital divide' which exists between the developed and the developing countries, some UNDP offices in the Caribbean have succeeded in obtaining private sector support for the further development of information technology in the region.

The Caribbean countries are committed to playing an active role in collaboration with other developing and developed countries, to fashion a global partnership that is based on principles of equity and justice and to ensure that their interests are taken fully into account within this framework. The forging of an effective partnership will depend on the provision of adequate external assistance by the developed countries and relevant multilateral development institutions in support of the domestic effort of Caribbean countries to achieve the MDGs.

Conclusion

The foregoing analysis suggests that, despite their comparatively limited focus on social development objectives**,** the MDGs provide a useful framework for orienting development and for measuring, in quantitative terms, progress towards the achievement of a number of fundamental needs of the countries of the Caribbean region.

The efforts made to implement the strategies to achieve the stipulated goals have however not fully realised the results that may have been expected. This is particularly true in the area of poverty reduction which, despite the progress made in Jamaica and the countries of the Eastern Caribbean, poverty in Guyana and Haiti remains at unacceptably high levels.

In the case of primary education, enrolment levels remain high, and performance, relative to resources made available, compares with some middle income countries. Further improvement in primary education would require the introduction of new organisational arrangements, improved teacher training, an upgrade of instructional technology as well as an increase in financial resources. The region is nevertheless likely to reach the target of universal primary education by 2015. It is proposed nevertheless that it would probably be more appropriate to recast the targets in terms of the achievement of specified enrolment ratios at the primary, secondary and tertiary levels of education in the Caribbean. The emphasis on tertiary education in the case of the Caribbean is particularly important given its contribution to the generation of the necessary intellectual capital that plays such a critical role in the development of globally competitive societies. This is all the more so since enrolment rates at the tertiary level in the Caribbean lag behind those in some countries in Latin America.

On the issue of gender equality and women empowerment, while the ratio of boys to girls at the primary level is in favour of boys, girls outpace boys at the secondary and tertiary level. For this reason, girls also exhibit a higher level of literacy than boys. It is felt nevertheless that the targets set under this goal are not the most relevant for the Caribbean. Proposals are therefore made in the report to change the targets to conform to the reality of the situation in the Caribbean by emphasising completion rates in addition to enrolment rates for all levels of education; gender gaps in earnings, sex disaggregated unemployment rates and occupational segregation; and prevalence of domestic violence, in addition to the share of seats in Parliament.

In terms of child mortality, while the statistics in the Caribbean suggest that the Latin American and Caribbean region ranks as the second lowest in under 5 mortality rates among the regions of the developing world, the rate is still five times greater than that of the developed countries. In the specific case of the Caribbean, there is considerable variation in the situation among countries. For example, two countries fall within the high category, eleven within the middle category and seven fall within the low category. Similarly, on the specific issue of infant mortality, the region also exhibits a wide variation among countries, with some countries falling within the highest and others within the lowest infant mortality rates (IMR). In the case of immunisation from measles, the majority of countries have achieved adequate immunisation coverage, measured in terms of the immunisation of ninety percent of children under one year. Only three countries, namely, Belize, Haiti and Suriname reflect low levels of immunisation.

Regarding maternal health, despite skilled attendance at delivery, mortality rates have on average improved only modestly, although some countries have made good progress in this regard. Consequently, based on the attainment of a seventy-five percent reduction in maternal mortality by 2015, current projections suggest that the region may not achieve this target.

HIV/AIDS, continues to pose a major challenge for the Caribbean which is only second to Sub-Saharan African terms of prevalence rates. While efforts have been made to deal with the epidemic through increased education and public awareness, an ongoing effort will need to be made to reduce the incidence of disease which not only has devastating consequences for the individuals affected but it also has a major negative impact on the economies of the region. The Caribbean therefore faces an uphill battle in seeking to halt and reverse the spread of HIV/AIDS by 2015. However, based on the formulation of a Caribbean Regional Strategy for HIV/AIDS and the establishment of a Pan Caribbean Partnership Against AIDS (PANCAP), the region has made important strides in responding to the epidemic. Moreover, as was mentioned earlier, countries such as the Bahamas, Barbados, Haiti and Jamaica are already beginning to report progress towards the target of halving and beginning to reverse the spread of the disease by 2015. In the case of malaria, of which the island countries of the Caribbean are relatively free, the mainland countries of Belize, Guyana and Suriname are susceptible to attacks. However, apart from the periodic outbreaks in the hinterland regions of these countries, good progress has been made in controlling the disease.

Given its ecological fragility and its susceptibility to natural disasters, the preservation of environmental sustainability remains a key objective in the Caribbean. However, the currently stipulated targets will need to be refocused to give priority to the management of climate change and the protection of coral reefs, although watershed management, solid waste disposal, deforestation and the conservation of biodiversity continue to be important.

Finally, the global partnership for development assumes, among other things, the creation of 'an open and non-discriminatory trading system' but Caribbean countries have asserted in the various multilateral trade negotiations the need for special and differential treatment to be accorded them in view of their overall size and relative underdevelopment. Clearly therefore, the countries of the region do not subscribe to a non-discriminatory trading system in this sense of the term.

Moreover, in terms of ODA, which is seen as a major element of the proposed partnership, while it is estimated that the realisation of the MDGs will require a significant increase in aid, current statistics indicate a declining trend in such aid. While it is projected that ODA will increase in 2004, given the needs of countries such as Afghanistan and Iraq, it is unlikely that the MDG target in this area will be realised.

Apart from aid and trade, the global partnership also envisages initiatives relating to productive employment for youth and the increased application of technology in support of development. However, for these efforts to be effective, targets would need to be established in respect of international assistance to be provided in these areas. It is for this reason that the UNDP 2003 Human Development Report has called for the establishment of a Commitment to Development Index (CDI) in order to monitor how well the developed countries live up to the commitment under the global partnership.

In the specific case of the Caribbean, the analysis suggests that in seeking to achieve the MDGs, increased attention would need to be paid, in the context of current efforts to intensify regional integration, to the promotion of integrated production, based on factor complementarity, which has the potential to generate increased levels of growth and output and thus lay the foundation for the achievement of the MDGs.

The analysis contained in this report as well as the conclusions emanating from the regional consultation on the MDGs and Sustainable Development held in Barbados on July 2003, which brought together participants from government, the private sector, civil society, regional institutions, including the University of the West Indies, and international organisations to exchange views on the subject, has also highlighted a number of important principles which it is important to summarise.

First, there is general agreement that MDGs must be integrated into a national planning framework and that there should be national ownership of the process by the governments concerned. In this regard, it will be necessary for governments to structure their budgetary allocations so as to ensure that they contribute directly to the promotion of the MDGs. Moreover, the process should involve civil society.

There is also widespread consensus that the availability of adequate statistics is an essential precondition for the elaboration and promotion of the MDGs. The relative dearth of information on the Caribbean in the World Development Indicators report of the World Bank and in the global Human Development Report prepared by UNDP emphasises the need for the region to pay special attention to adequate data collection if it is to be in a position to make an accurate assessment of its progress towards the achievement of the MDGs. Given the weak statistical base in some countries and territories in the region, considerable work will need to be done to strengthen their data collection capability and also to ensure the preparation of suitably disaggregated data in these countries. UN/ECLAC has made an important contribution by identifying the specific requirements in this area. It is felt however that increased resources should be allocated to this area both by national governments and international organisations in order to assist in establishing suitable benchmarks as a basis for assessing progress towards the achievement of the MDGs.

One important issue which has been highlighted is the need to effect more systematic linkages among the various MDGs since although they are listed separately, they are nevertheless closely inter-linked. In this context the UN Development Assistance Framework (UNDAF) could provide a useful framework at the country level for ensuring the systematic linkage among the various goals. Similarly, regional and sub-regional programmes funded by the UN system and other international organisations could also be used as a framework for ensuring the integration of the various goals within a holistic development framework.

Caution should be exercised in adopting a linear projection of progress towards the achievement of the MDGs since sustaining such progress would depend to a large extent on appropriate policy interventions and investment in the productive sector as well as in

economic infrastructure and social development. In the absence of such investments, countries could actually experience retrogression in their pursuit of the MDGs.

In promoting the MDGs, special emphasis should be placed on participation and good governance which in fact underpin the shift to the new development paradigm reflected in the adoption of MDGs.

In seeking to promote the MDGs in a Caribbean context, it is recognised that some of the goals will need to be modified to take account of the particular realities of the countries of the region. This is particularly so in the case of education, gender and environmental sustainability.

In promoting the MDGs in the Caribbean it will be necessary to factor into the equation the vulnerability and ecological fragility of the region. However, it is recognised that in respect of the former, a distinction should be made between *'structural vulnerability'* which derives from objective circumstances and 'conjunctural vulnerability' which is caused by the adoption of inappropriate policies. Moreover, in dealing with the susceptibility of the region to natural hazards such as hurricanes, earthquakes, vulcanoes, and floods, it will be important to shift the focus from disaster response to disaster reduction through the development of early warning systems, disaster resistant construction and avoiding the location of human settlements in unstable settings such as potential landslides and flood plains. The shift from disaster response to disaster reduction is most clearly reflected in the International Strategy for Disaster Reduction (ISDR) adopted by the UN General Assembly in 1999.

The role of regional analysis in highlighting cross-country and cross-regional trends should be emphasised. For example, the Latin American Regional Report on Poverty Reduction, prepared by UNDP, in collaboration with the UN Economic Commission for Latin America and the Caribbean, points to the fact that, based on the application of iso-poverty curves, income inequality has had a negative impact on poverty reduction since the poverty reduction elasticity of growth diminishes as income distribution worsens. The phenomenon is also evident in the case of the Caribbean.

A major challenge in implementing the MDGs in the Caribbean is the need to link national and regional initiatives, bearing in mind the existence of a vibrant regional integration movement. The importance of the linkage between national and regional objectives is underlined by current efforts to deepen the integration movement through the creation of a Caricom Single Market and Economy (CSME) and also the decision by the Caribbean Heads of Government at their twenty fourth Conference held in Montego Bay from 5-7 July, 2003 to appoint a High Level Group of Experts to identify the possibilities for promoting production integration in the region.

The regional dimension is also important for the Caribbean in view of the existence of the SIDS platform adopted at the Conference on the Sustainable Development of Small Island Developing States held in Barbados in 1994 and the proposed Barbados +10 Conference to be held in January 2005.

It should also be pointed out that the Council for Human and Social Development (COHSOD) has sought to elaborate a strategy for human and social development which is closely related to the MDGs. In fact, COHSOD has appointed a Futures Policy Group which is engaged in the elaboration of an overall strategy of human and social development. In this context, the Group has identified core, complementary and cross cutting issues in respect of human and social development. In addition, the Group will seek to identify best practices in the realm of human and social development that could be replicated in countries in the region. Finally, the Group is also seeking to identify the conditions necessary for the creation of a knowledge-based society.

Looked at critically, MDGs relate in the main to the social development universe and will therefore need to be closely linked to broader development processes if they are to be successfully pursued.

It is clear that the formulation and implementation of the MDGs in the Caribbean will need to take account of these considerations as well as the specific realities of the region.

The insights reflected in the analysis contained in this report should enable the various stakeholders in the region to pursue the MDGs with a greater appreciation of the vital pre-requisites for their effective implementation. More generally, it is hoped that it would complement the various national reports by serving as an instrument to promote awareness and consensus building within national governments and regional institutions, and thus motivate them to promote the MDGs and also to build an appropriate capacity, including an increased statistical capability, for monitoring and reporting on progress made towards the targets stipulated under the various goals.

Notes:

[1] $1.00 per day is equivalent to $1.08 per day at 1993 international prices. See "Definitions and sources (of indicators)" at http://www.developmentgoals.org/Definitions_Sources.htm

[2] This figure was obtained from the Jmaaica Survey of Living Conditions 2002

[3] Downes, 2003 reported an estimate of 8.2% for St. Kitts only . The World Bank estimate was preferred in this study.

[4] See Report 2003. Indigence is referred to as "critical poverty".

[5] The severity of poverty is measured by the Foster-Greer-Thorbecke (FGT) measure, which his essentially the product of the Head count and the poverty gap measures.

[6] ECLAC, 2002, P. 43

[7] Ibid. P. 44

[8] IDB, 2003

[9] Grown, C., Gupta, G.R., & Khan, Z. 2003. Promises to Keep: Achieving Gender Equality and the Empowerment of Women. Millennium Project. Background Paper of the Task Force on Education and Gender Equality. Commissioned by the UN Secretary General and supported by the UN Development Group.

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[27] Grown, C., Gupta, G.R., & Khan, Z. 2003. *op.cit*.

[28] Grown, C., Gupta, G.R., & Khan, Z. 2003. *op.cit*.

[29] Progress of the World's Women 2000. UNIFEM Biennial Report. o*p.cit*

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[41] Source: http://hdr.undp.org/reports/global/2003/indicator/index.html Accessed: 1 Apr 2004

[42] Source: http://www.unicef.org/files/SOWC_04_eng.pdf / Accessed: 31 Mar 2004; x=years other than heading

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[46] Bermuda is mentioned here, although it is situated outside the Caribbean Sea, because it shares historical and cultural links with Caribbean countries which are former dependencies of Britain.

[47] The managers of the Global Fund against AIDS, Tuberculosis and Malaria (GFATM) have indicated that assistance will not be given directly or solely to Governments. They have stipulated that multi-sectoral teams should work in each country to plan, execute, monitor and evaluate their respective programmes against the three named diseases. Each national team is acknowledged as comprising the "Country Coordinating Mechanism."

[48] The five agencies are CAREC, CHRC, CRN+, the UNAIDS team in the Caribbean and UWI.

[49] The World Bank has recently provided loans of US$15.5 million to Barbados, US$15 million to Jamaica, and US$6 million to Grenada, to support their National AIDS Programmes.

[50] This policy has been outlined in detail in a recent article published by CDC and it is being accepted in health care facilities within the Caribbean.

[51] United Nations Development Group. MDG Country Reporting: Second Guidance Note. June 2003.

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[53] This assessment is based on recent interviews, including: Franklin McDonald, CEO, National Environmental and Planning Agency, Jamaica, Dr John Agard, CEO, (environmental regulatory agency), Trinidad and Tobago, Leonie Barnaby (position), Ministry of Land and Environment, Jamaica

The problem is also reviewed in the literature. See, for example: A Downes and D Downes. The Millennium Development Goals in the Eastern Caribbean: A Progress Report. June 2003; E Straughn. A Mechanism for Monitoring the Millennium Development Goals for Barbados and the OECS Sub-Region. April 2002.
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[57] This is likely to account for one notable discrepancy; the Government of Jamaica estimated in 2001 that the rate of deforestation was only -0.1%[57]. The UNEP calculations indicate a rate 72 times higher.

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[60] The UNEP categories, in full, are: strict nature reserves/wilderness areas, national parks, natural monuments, habitat or species management areas, protected landscapes and seascapes, and managed resource protected areas.

[61] 100ha = 1km²

[62] 100ha = 1km²

[63]Interview with Leonie Barnaby, Ministry of Land and Environment, Jamaica. August 2003.

[64] UNEP. GEO Latin America and the Caribbean: Environment Outlook. 2000. Primary sources include:
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[65] Note that the available energy data is in million kilowatt-hours, rather than kg oil equivalent, and that GDP data is in million 1995 US$, rather than GDP at PPP. The energy data is from 1996, the GDP data from 1998.

[66] UNEP. GEO Latin America and the Caribbean: Environment Outlook. 2000. Primary sources include:
Carbon Dioxide Analysis Centre, 1999.

[67] The large industrial and rapidly-industrializing countries have, of course, far higher aggregate emissions.

[68] It is important to note, however, that trans-boundary issues will always generate problems of this kind, as some decision has to be made as to how to attribute the total pollution load between jurisdictions.

[69] Acknowledgements to John Agard for the explanation of this particular accounting artifact.

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Other sources include: Central Intelligence Agency World Factbook at ***http://www.cia.gov/cia/publications/factbook;*** FAO world forest inventory.